REPORT RESUMES

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A STUDY OF THE ATTRIBUTES OF APPLICANTS TO NATIONAL SCIENCE FOUNDATION SUMMER INSTITUTES IN 1964.

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CHARACTERISTICS OF APPLICANTS TO SUMMER INSTITUTES FOR SCIENCE AND MATHEMATICS TEACHERS SPONSORED BY THE NATIONAL SCIENCE FOUNDATION ARE EXAMINED TO DETERMINE CHARACTERISTICS WHICH DISTINGUISH BETWEEN SUCCESSFUL AND UNSUCCESSFUL APPLICANTS. APPLICATION FORMS OF ALL ACCEPTEES AND UP TO TWICE AS MANY REJECTEE FORMS, SELECTED AT RANDOM FROM EACH INSTITUTE, WERE CLASSIFIED ACCORDING TO (1) LEVEL OF THE APPLICANT'S TEACHING ASSIGNMENT, (2) TYPE OF INSTITUTE (SEQUENTIAL OR UNITARY), (3) PREPARATION LEVEL PREREQUISITE TO ADMISSION, AND (4) SEX. PERCENTAGES, STANDARD DEVIATIONS, AND CHI-SQUARE WERE USED TO INTERPRET DATA RELATED TO APPLICANT'S PERSONAL CHARACTERISTICS, (2) EDUCATIONAL BACKGROUND, (3) PROFESSIONAL ACTIVITIES, (4) TEACHING EXPERIENCE, (5) TEACHING SCHEDULE, AND (6) CERTIFICATION STATUS. FINDINGS WERE COMPARED WITH THOSE OF SIMILAR STUDIES CONDUCTED DURING 1957 AND 1960. SELECTION OF PARTICIPANTS WAS STRONGLY INFLUENCED BY THE APPLICANT'S UNDERGRADUATE MAJOR AND GRADES. PROBABILITY OF ACCEPTANCE WAS ALSO POSITIVELY INFLUENCED BY PROFESSIONAL ACTIVITIES, HIGHEST DEGREE EARNED, GRADUATE GRADES, AND TEACHING ASSIGNMENT. PREVIOUS INSTITUTE ATTENDANCE WAS OFTEN A REASON FOR REJECTION IN UNITARY TYPE INSTITUTES. A DETAILED SUMMARY OF DATA USED IN THE STUDY IS INCLUDED IN A SEPARATE APPENDIX. (AG)

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ATTRIBUTES OF APPLICANTS TO NATIONAL SCIENCE FOUNDATION SUMMER INSTITUTES IN 1964

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PSYCHOMETRICS CONSULTANTS

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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A STUDY OF THE ATTRIBUTES OF APPLICANTS TO NATIONAL SCIENCE FOUNDATION SUMMER INSTITUTES IN 1964

Introduction

The Summer Institutes Program sponsored by the National Science Foundation was designed to strengthen the subject matter competence of science and mathematics teachers at the elementary, secondary, and college levels. To this end, the Foundation scheduled 555 institutes at educational institutions throughout the United States in 1964.

Approximately 27,000 individuals participated in the summer program. Selection of participants presumably was based on answers to questions in the Summer Institute application form supplied by NSF. Each institute director, usually a faculty member of the university offering the institute, made his own selections. This study was undertaken to discover the factors that tended, on the whole, to distinguish accepted from rejected applicants. To arrive at this objective, analyses were made of 9600 application forms completed by accepted and rejected applicants to the NSF Summer Institutes in 1964. The analyses were designed with the following aims:

1. to provide tabulations of the various responses to the questions on the application form;
2. to describe the central tendencies and distribution characteristics of the accepted and rejected groups at each institute level studied;
3. to examine for significance the differences, if any, between the accepted and the rejected groups at each institute level studied;
4. to compare the various institute levels in terms of the attributes of acceptees and rejectees in each;
5. to compare the high school teacher summer institute applicants in 1964 with those in 1957 and 1960.

Procedure

Sampling. Each Summer Institute director was asked to provide all of his acceptee forms, and up to two times as many rejectee forms, randomly selected. There was virtually 100% response to this request.

Since it was desirable to discover what factors other than previous institute participation might be operating in rejection of an applicant, the forms of those rejectees who had participated in NSF institutes of any kind in 1962 or 1963 were eliminated prior to sampling.

The acceptee forms and rejectee forms were studied separately. Each of these groups was subdivided according to the level of teacher for which the institutes were designed, i.e., elementary, secondary, or college. The secondary institutes were further categorized as either unitary or sequential. The college institutes and the unitary and sequential secondary institutes were subdivided according to the preparation levels required by the institutes. The latter categories were "high," "medium," and "low," and their correspondence to the numeric levels shown in the NSF Summer Institute brochure are as follows:

Low	(little or no preparation in the field required): (0) (1) (0, 1, 2)
Medium	(moderate preparation required): (2) (3) (1, 2, 3) (2, 3) (2, 3, 4) (1, 2, 3, 4)
High	(advanced preparation required): (4) (5) (4, 5) (3, 4, 5)
Unclassifiable	(overlapping preparation levels): (0, 1, 2, 3) (1, 2) (3, 4) (0, 2, 4) (0, 1, 2, 3, 4, 5) (2, 4)

Each of the 20 groups thus established was sorted according to region of residence of the applicant. Ten U.S. regions were defined, the nine standard U.S. census regions and a tenth that included Puerto Rico, U.S. territories, and U.S. schools overseas. The forms were then alphabetized according to applicants' names in each of the resulting 200 sets of forms. This procedure permitted elimination of duplicate applications by comparing forms within a census region. Since an applicant was assumed to have submitted the same home address on all of his applications, no search was made for duplicates between regions. One form per individual was retained in the collection of forms that were to be sampled.

Each region of residence of the applicants was represented in the sample with a number of forms proportional to the number received from that region. The sample sizes among the secondary teacher groups and the college teacher groups were approximately proportional to the number of participants within each group.

Description of Samples

Sample	No. of Institutes	Original Group[+] Acc.	Original Group[+] Rej.	Number in Sample Acc.	Number in Sample Rej.	Sex of Applicants Acceptees M	Sex of Applicants Acceptees F	Sex of Applicants Rejectees M	Sex of Applicants Rejectees F
Elementary	36	1,043	1,721	800	800	457	343	475	325
Secondary Combined[++]	439	20,719	22,600	3,000	3,000	2,370	630	2,487	513
Secondary Unitary Low	113	4,679	5,652	800	800	630	170	673	127
Secondary Unitary Medium	85	3,370	3,812	525	525	406	119	425	100
Secondary Unitary High	19	607	767	125	125	103	22	111	14
Secondary Sequential Low	19	1,101	1,298	150	150	119	31	119	31
Secondary Sequential Medium	59	3,500	3,385	400	400	334	66	339	61
Secondary Sequential High	30	1,685	1,539	200	200	159	41	173	27
College Low	4	183	203	125	125	119	6	112	13
College Medium	16	560	537	275	275	250	25	241	34
College High	40	1,125	763	600	600	537	63	530	70
College (Unclassified)	20	-	-	-	-	-	-	-	-

[+] This category indicates the number of forms on hand prior to sampling after elimination of duplicates and recent participant rejectees.

[++] The Secondary Combined sample included the institutes with unclassifiable preparation level requirements as well as the high, medium and low groups.

Coding. A code was developed for the responses to most of the questions in the 1964 NSF Summer Institutes application form. The complete code, covering 93 variables, has been separately bound for NSF.

Some of the questions required coding of a special nature. These are indicated below.

"Employment address": each city with a population of over 1/4 million was given a code. Towns with populations under 1/4 million were grouped together under one code. This item was also coded for state and census region.

"Employment record" was coded for the applicant's predominant professional activity during the period 1959-1964. Activities taking the lesser proportions of the applicant's time were not noted.

"Years of teaching experience (by June, 1964)" was coded to show both recency and amount of teaching experience at elementary and secondary schools, at colleges, and at "other" schools, by totalling separately the number of years of experience gained before and since June, 1954 at each level. The types of school listed under "other," included army, civil defense, post-secondary technical institutes and adult education courses.

"Weekly school schedule" was coded for chief teaching emphasis and second teaching emphasis. To be considered the predominant subject in a teacher's schedule, a subject had to be taught for at least 2 periods a day or at least 30% of the time, as well as simply taking more time than the other subjects in the schedule.

Undergraduate and graduate grade-point averages were computed from the information about credits and grades on the forms. To make this item consistent with previous NSF studies of similar materials, the averages were obtained using the system, A = 4, B = 3, C = 2, D = 1. The few forms that could not be interpreted reliably due to unfamiliar grading systems were discarded from the sample.

Previous institute attendance was coded for acceptees only, since recent-participant rejectees were not included in the study. It was noted when eliminating these rejectee forms that there were discrepancies between responses of "No NSF institutes attended previously" and information on the 1962 and 1963 institute participation lists, and it was assumed that similar discrepancies would have occurred for the acceptees. The reliability of the counts for this item, then, is in some doubt.

Data Processing

Tabulation. The codes for each application form were transferred by keypunching to two IBM cards. Frequency distributions of the responses to each coded variable were obtained separately for acceptees and rejectees in 13 different studies. The counts were made on the IBM 1401.

In order to study the characteristics of male and female applicants, the Secondary Unitary Medium sample was sorted for males and females, and tabulations of all responses were made for the acceptees and rejectees of these new groupings.

Statistical Analysis. Means and standard deviations were computed for age; number of years of teaching experience in biology, chemistry, physics, mathematics, earth science, general science, and "other subjects"; recency of bachelor's and master's degrees; and undergraduate and graduate semester hours and grades. The mid-points of intervals were used as representational values in all cases. Zero and "no response" counts were not included in the sample number when computing means for age, recency of degrees, or grades. Two sets of means were calculated for the teaching experience items, one incorporating the "no experience" counts, and one ignoring them.

The z-ratio was used to test for significance of difference between the means of the acceptees and rejectees on the variables for which means were obtained. In the few cases where eliminating zero counts from the distribution resulted in a small sample number, i.e., 15 or under, the t-test, a more conservative test, was used.

The chi square formula was applied to test for significance of difference between acceptees and rejectees on variables with qualitative categories. There were always more than two categories of response to a question. The procedure was to compute a chi square for each category, using a fourfold contingency table with the numbers of acceptees and rejectees shown on one side who fit into a particular response category, and the remainder of the sample (who did not fit into that category) shown on the other side. In certain cases, some comparisons were also made between two specified categories. For example, a test was made of the difference between acceptees and rejectees as to the proportion who had the bachelor's degree as the highest degree earned and those who had the master's as the highest.

Chi squares were computed only for data where cell frequencies were 10 or greater. Corrections were made for frequencies smaller than 30 by Yates' method (i.e., subtract .5 from each expected frequency).

Profiles of the accepted and rejected groups describing their general characteristics in terms of means and modes are presented at the beginning of each study.

When differences between groups are noted in the text, these differences were statistically significant or "reliable" unless otherwise indicated.

Comparison of 1957, 1960, and 1964 data. Comparisons of the high school teacher applicants to NSF summer institutes in 1957, 1960, and 1964 were made by means of tests of significance of difference between percentages. The statistical procedure for that set of comparisons is more fully described in Chapter 2.

Tables 1 through 27 are included in this volume. Tables A-1 through A-93 are in a separately-bound appendix. For all tables in this report, significant results are indicated by one or two asterisks beside the top number in a set of two numbers that are being compared.

Example:

1957	35**
1960	30*
1964	28

The example indicates that the 1957 value was significantly higher than that for 1960, and the 1960 value was significantly higher than that for 1964. The first difference was significant at the .01 level (**), the second, at the .05 level (*).

Chapter 2

SECONDARY SCHOOL TEACHER APPLICANTS TO NSF SUMMER INSTITUTES IN 1957, 1960, and 1964

Background of the 1957 and 1960 studies

The 1957 study. The Corporation for Economic and Industrial Research published a report which tabulated and summarized information relating to the educational preparation, employment record, and professional interests of the high school teacher and college instructor applicants to the 1957 summer institutes and the 1957-1958 academic year institutes. Data was obtained for participants, for acceptees who withdrew their applications, and for rejectees. Since one of the purposes of the present study was to discover the factors that operated in selection of applicants, it was decided to combine the 1957 figures of participants with accepted non-participants, the assumption being that the same selection factors would have been in effect for both groups.

The 1960 study. A study published by Science Research Associates compared the attributes of acceptees and rejectees within and between the 1960 Summer Institutes program, the 1960-61 Academic Year program, and the 1960-61 In-Service program. Where appropriate, a separate study was made of applicants at each teaching level, i.e., elementary, junior high school, high school, junior college, and college. Most of the items on the 1960 application forms were coded, and the responses were tabulated and analyzed for significance of difference between the accepted and rejected groups. The procedure for the 1964 study was modeled after that of the 1960 study with the major exception that only summer institutes were studied. In addition, in the 1964 study, junior high school teachers were classified as high school teachers, and junior college teachers as college teachers.

In order to make the data for the three years comparable in terms of level of teaching and kind of program for which application was made, only applicants to summer institutes for high school teachers were studied. Since the categories of unitary and sequential institutes, and institutes requiring different preparation levels were not noted in the previous studies, the 1964 data reported in this chapter combines the data for all the secondary school teacher applicants. In the 1964 appendix of tables these data appear under "Secondary Combined".

Statistical Procedure

In the cases where the 1957 data were reported in terms of means, not frequencies, each mean was weighted by the number of cases in the sample from which it came, before averaging the means of participants with accepted non-participants. The sample sizes of accepted and rejected secondary school teacher applicants to summer institutes in 1957 were 5154 and 3912, respectively. The sample sizes for 1960 were 2805 acceptees and 2787 rejectees, and for 1964, 3000 acceptees and 3000 rejectees.

Wherever the data for the three years were comparable, i.e., response categories similar or nearly the same, a study was made to determine the differences, if any, among the acceptees in 1957, 1960, and 1964, and among the rejectees for those years. Further, the differences between acceptees and rejectees for one year was compared to those differences for the other two years.

Since the 1957 data were reported in percentages as well as frequencies, and since the sample sizes differed, the significance of group differences was determined by testing differences between percentages.

In examining the results of the comparison, certain considerations should be kept in mind. First, recent-participant-rejectees were omitted from the 1964 sample, but not from the 1957 and 1960 samples. Second, an individual could appear only once in the 1960 or 1964 samples, since duplicate applications were removed, but this was not necessarily true of the 1957 sample. Conceivably, an accepted non-participant at one institute might have been an accepted participant at another, and might have been counted more than once. Third, the 1957 and 1960 secondary school teacher samples did not include junior high school teachers. The samples for the three years, then, were not perfectly matched, but were sufficiently alike so that the trends that will be noted may be considered reliable.

COMPARISON OF THE 1957, 1960, AND 1964 DATA

Personal Variables

Age (Table 1). Intervals of 5 years were used in tabulating this item. Ages noted are interval midpoints except for the "under 21" category.

In 1960, ages ranged from under 21 years to 63 years for acceptees, and from under 21 to 68 years for rejectees. In 1964, the ages ranged from under 21 to 68 for both the acceptees and rejectees. Although the 1964 institutes accepted some older applicants than did those in 1960, the largest age group of acceptees in 1964 was younger than the largest age group in 1960: the most typical age interval for acceptees was 31-35 in 1960 and 26-30 in 1964. The most typical age interval for rejectees was 26-30 in both years.

In terms of average rather than modal age, the 1960 rejectees were a half-year older than the acceptees (not significant), but in 1964 the acceptees were, on the average, one and one-fifth years older than the rejectees (see Table 1). Both the accepted and rejected groups in 1964 were significantly younger, on the average, than their counterparts in 1960. It appears then that the 1964 institutes attracted somewhat younger applicants than did those in 1960, but that there was a tendency in selection in favor of the older applicant in 1964.

High School Teachers at the 1957, 1960, and 1964
Summer Institutes

TABLE 1 AGE+

Sample	Group	N Responding	Mean Age in Years
1960	A	2793	35.1**
1964	A	2984	34.4
1960	R	2772	35.6**
1964	R	2972	33.2
1960	A	2793	35.1
1960	R	2772	35.6
1964	A	2984	34.4**
1964	R	2972	33.2

+No data was available for 1957.

Number of dependents and dependent's allowances (Table 2). There was virtually no change in the mean numbers of dependents and requested dependent's allowances for the accepted groups in 1960 and 1964. The rejected group in 1960, however, had more dependents and asked for more allowances than did the rejected group in 1964 (see Table 2). In 1960, moreover, the fewer the number of dependents and allowance needs, the greater was the probability of being accepted, while in 1964 no such factor seemed to be operating. Since the average number of dependents (2.05) for all applicants in 1964 is lower than that for 1960 (2.2) it may be that what appears to be a trend away from using allowance needs as a selection factor is really a reflection of the smaller number of dependents involved in the 1964 applicant group.

Educational Background

Undergraduate semester credits (Table 3). In terms both of the number of individuals involved and average number of credits per group in a particular subject field, education and mathematics were the most popular undergraduate subjects among applicants accepted in 1957, 1960, and 1964. This was true also for the rejected groups with the exception that in 1957, the largest numbers of credits were seen for education and biology.

High School Teachers at the 1957, 1960, and 1964
Summer Institutes

TABLE 2 MEAN NUMBER OF DEPENDENTS AND DEPENDENT'S ALLOWANCES+

Sample	Group	N	Dependents	Dependent's Allowances
1960	A	2805	2.1	2.0
1964	A	3000	2.1	1.9
1960	R	2787	2.3**	2.2**
1964	R	3000	2.0	1.8
1960	A	2805	2.1**	2.0**
1960	R	2787	2.3	2.2
1964	A	3000	2.1	1.9
1964	R	3000	2.0	1.8

+No data was available for 1957.

In both the accepted and rejected groups a trend is evident, going from 1957 to 1964, for fewer undergraduate credits in chemistry and physics. The differences from one year to the next are statistically significant. This trend appeared also for mathematics, education, earth science, and biology from 1957 to 1960, but the 1964 figures for these subjects generally are either the same or slightly higher than those for 1960.

Since neither the original distribution nor standard deviations were reported in the 1957 study, the statistical tests made for significance of difference involved only the 1960 and 1964 groups. In both of these years the accepted group had more undergraduate credits in chemistry and physics and fewer credits in education than did the rejected group. This trend is a continuation of one observed in the 1957 data, but it should be noted that the differences in number of credits between acceptees and rejectees became smaller with each succeeding year studied. If amount of undergraduate preparation in the sciences was a pronounced selection factor in 1957, it had become less of one, on the whole, in 1964, probably due to the availability of institutes with varying prerequisites.

Graduate semester credits (Table 4). In both the accepted and rejected groups in all three years the highest average number of graduate credits was in education, with biology or mathematics a distant second.

High School Teachers at the 1957, 1960, and 1964 Summer Institutes

TABLE 3 MEAN NUMBER OF UNDERGRADUATE SEMESTER HOURS$^+$

Sample	Group	N	Chemistry	Physics	Mathematics	Education	Earth Science	Biology	All Sciences
1957	A	5154	17.9	11.6	20.3	25.3	3.4	19.9	13.2
1960	A	2805	12.5**	8.4**	16.1	19.9	2.3	14.4	9.4
1964	A	3000	10.9	7.1	16.1	20.1	2.9	14.5	8.8
1957	R	3912	15.2	8.9	17.0	24.6	2.8	19.4	11.6
1960	R	2787	11.2**	7.6**	16.0	20.4	2.4	14.5	8.9
1964	R	3000	9.6	6.3	16.0	20.6	3.0	14.0	8.2
1957	A	5154	17.9	11.6	20.3	25.3	3.4	19.9	13.2
1957	R	3912	15.2	8.9	17.0	24.6	2.8	19.4	11.6
1960	A	2805	12.5**	8.4**	16.1	19.9	2.3	14.4	9.4
1960	R	2787	11.2	7.6	16.0	20.4	2.4	14.5	8.9
1964	A	3000	10.9**	7.1**	16.1	20.1*	2.9	14.5	8.8
1964	R	3000	9.6	6.3	16.0	20.6	3.0	14.0	8.2

$^+$Statistical tests compared 1960 and 1964 only.

High School Teachers at the 1957, 1960, and 1964 Summer Institutes

TABLE 4 MEAN NUMBER OF GRADUATE SEMESTER HOURS[+]

Sample	Group	N	Chemistry	Physics	Mathematics	Education	Earth Science	Biology	All Sciences
1957	A	5154	1.6	0.8	2.3	16.5	0.1	3.8	1.6
1960	A	2805	1.5	1.2	2.6*	11.0**	0.4	2.8	1.5
1964	A	3000	1.7	1.4	3.4	8.4	0.8	3.2	1.8
1957	R	3912	0.9	0.2	1.5	13.7	---	3.0	1.0
1960	R	2787	1.2	1.2	3.0**	11.6	0.5	3.0**	1.5
1964	R	3000	1.0	0.8	2.2	7.5	0.6	2.1	1.1
1957	A	5154	1.6	0.8	2.3	16.5	0.1	3.8	1.6
1957	R	3912	0.9	0.2	1.5	13.7	---	3.0	1.0
1960	A	2805	1.5	1.2	2.6	11.0	0.4	2.8	1.5
1960	R	2787	1.2	1.2	3.0	11.6	0.5	3.0	1.5
1964	A	3000	1.7**	1.4**	3.4**	8.4**	0.8**	3.2**	1.8
1964	R	3000	1.0	0.8	2.2	7.5	0.6	2.1	1.1

[+] Statistical tests compared 1960 and 1964 only.

A marked trend from 1957 to 1964 appeared for the accepted groups in an increase in the number of graduate credits in each of the five sciences, and a decrease in number of credits in education. The rejected applicants also showed steadily decreasing numbers of credits in education, but they were not included in the trend to increase science credits.

In 1960, number of graduate credits did not appear to distinguish the accepted from the rejected applicant, but in 1964 it appeared to be a decided selection factor. For every subject, the higher the number of credits, the greater the likelihood of acceptance. Evidently amount of graduate work has come to have a greater influence than undergraduate work on selection of applicants in 1964.

Undergraduate and graduate grade-point averages (Tables 5 and 6). Grade-point averages were computed taking into account only those who took the specified courses. Since the numbers of individuals involved were not reported in the 1957 study, it was not possible to weight the means of the participant and accepted non-participant groups before averaging. The averages shown for the 1957 acceptees in Tables 5 and 6 are therefore approximations. The average grades were reported to two decimal places only for the 1964 data and for the 1957 acceptee estimations.

The average undergraduate grades for acceptees and rejectees in all three years ranged from B- to B and the mean graduate grades for all groups ranged from B to B+. In all three years, the accepted groups had slightly higher averages than the rejected groups. These differences, however, are reliable. In 1960, this was true for the undergraduate grades in all 6 subjects and for graduate grades in biology, chemistry, physics, and mathematics. In 1964, the acceptees had reliably higher grades than the rejectees in all 6 undergraduate courses and in all graduate courses except earth science.

With few exceptions, the applicants as a group in 1964 had lower undergraduate and graduate grade-point averages than those in 1960, but the trend in selection continued to be in favor of those with the higher grades.

Major subject for bachelor's degree (Table 7). The most frequent undergraduate major in all three years, as would be expected for this group, was science or mathematics; education or a non-science was the next most frequent. A science or mathematics major was less typical in 1964 than in 1957 or 1960. Majors in education, however, increased with each succeeding year. Multiple majors, for example, education and science, were more evident in 1964 than in 1960.

In all three years selection tended to favor those with a science or mathematics major and to discriminate somewhat against those with an education major.

Major subject for master's degree (Table 8). Included in the 1957 sample for these data are a sizable number of applicants (22% acceptees and 21% rejectees) who did graduate work but did not get the master's degree. The 1960 and 1964 data categorize the majors only of those who did

High School Teachers at the 1947, 1960, and 1964 Summer Institutes

TABLE 5

MEAN UNDERGRADUATE GRADES

Sample	Group	Biology		Chemistry		Physics		Mathematics		Earth Science		Education	
		N	M	N	M	N	M	N	M	N	M	N	M
1957	A		3.07		2.95		2.95		2.87		3.10		3.07
1960	A	2263	2.8	2274	2.6 **	2151	2.6 **	2542	2.7 **	1030	2.9 **	2599	3.0
1964	A	2472	2.75	2343	2.45	1908	2.38	2718	2.61	1099	2.72	2779	2.99
1957	R		2.9		2.7		2.7		2.7		3.0		3.0
1960	R	2251	2.7 **	2154	2.5 **	2022	2.5 **	2505	2.6 **	1055	2.8 **	2573	2.9
1964	R	2471	2.58	2222	2.28	1854	2.22	2696	2.45	1118	2.64	2807	2.89
1957	A		3.07		2.95		2.95		2.87		3.10		3.07
1957	R		2.9		2.7		2.7		2.7		3.0		3.0
1960	A	2263	2.8 **	2274	2.6 **	2151	2.6 **	2542	2.7 **	1030	2.9 **	2599	3.0 **
1960	R	2251	2.7	2154	2.5	2022	2.5	2505	2.6	1055	2.8	2573	2.9
1964	A	2472	2.75**	2343	2.45**	1908	2.38**	2718	2.61**	1099	2.72*	2779	2.99**
1964	R	2471	2.58	2222	2.28	1854	2.22	2696	2.45	1118	2.64	2807	2.89

High School Teachers at the 1957, 1960, and 1964 Summer Institutes

TABLE 6

MEAN GRADUATE GRADES

Sample	Group	Biology		Chemistry		Physics		Mathematics		Earth Science		Education	
		N	M	N	M	N	M	N	M	N	M	N	M
1957	A		3.37		3.13		3.30		3.30		3.33		3.45
1960	A	717	3.2	529	3.1 *	530	3.1 *	764	3.2 **	258	3.2 **	1623	3.2
1964	A	739	3.16	557	3.02	513	3.02	893	3.12	341	3.02	1521	3.18
1957	R		3.3		3.1		3.2		3.2		3.3		3.3
1960	R	672	3.1 *	452	3.0 *	511	3.0 **	831	3.1 **	268	3.1 *	1714	3.2 *
1964	R	524	2.98	324	2.88	309	2.90	655	2.92	253	2.99	1318	3.14
1957	A		3.37		3.13		3.30		3.30		3.33		3.45
1957	R		3.3		3.1		3.2		3.2		3.3		3.3
1960	A	717	3.2 **	529	3.1 *	530	3.1 *	764	3.2 **	258	3.2	1623	3.2
1960	R	672	3.1	452	3.0	511	3.0	831	3.1	268	3.1	1714	3.2
1964	A	739	3.16**	557	3.02**	513	3.02*	893	3.12**	341	3.02	1521	3.18*
1964	R	524	2.98	324	2.88	309	2.90	655	2.92	253	2.99	1318	3.14

High School Teachers at the 1957, 1960, and 1964 Summer Institutes

TABLE 7

MAJOR SUBJECT FOR BACHELOR'S DEGREE

Percentage of Applicants in Each Major

Sample	Group	N with Bachelor's	% with Bachelor's	Sci. or Math	Sci. and Math	Non-Sci.+	Sci.+ and Non-Ed, Non-Sci.	Education (field unspecified)	Education (Science+)	Education (Non-Sci.+)	Education, (Sci and Non-Sci+ fields)
1957	A	5144	99.2	64.9**	--	7.3**	7.6	5.7**	11.8**	1.2**	1.1**
1960	A	2765	98.6	70.3**	2.0	11.4	--	13.2*	1.8**	0.3**	0.0
1964	A	2977	99.2	47.3	1.4	10.2	1.0	15.2	21.5	2.8	0.3
1957	R	3834	98.9	56.9**	--	11.8	8.3	8.0**	11.2**	1.7**	1.3**
1960	R	2752	98.7	64.0**	2.0	13.6*	--	16.8	2.4**	0.5**	0.2
1964	R	2973	99.1	42.6	1.5	11.3	2.0	17.1	19.9	4.8	0.4
1957	A	5144	99.2	64.9**	--	7.3**	7.6	5.7**	11.8	1.2	1.1
1957	R	3834	98.9	56.9	--	11.8	8.3	8.0	11.2	1.7	1.3
1960	A	2765	98.6	70.3**	2.0	11.4*	--	13.2**	1.8	0.3	0.0
1960	R	2752	98.7	64.0	2.0	13.6	--	16.8	2.4	0.5	0.2
1964	A	2977	99.2	47.3**	1.4	10.2	1.0	15.2*	21.5	2.8**	0.3
1964	R	2973	99.1	42.6	1.5	11.3	2.0	17.1	19.9	4.8	0.4

+The word "science" in a heading is to be interpreted as "science and/or mathematics" in Tables 7 and 8.

High School Teachers at the 1957, 1960, and 1964 Summer Institutes

TABLE 8

MAJOR SUBJECT FOR MASTER'S DEGREE[++]

Percentage of Applicants in Each Major

Sample	Group	N with Mas-ter's	% with Mas-ter's	Sci. or Math	Sci. and Math	Non-Sci.[+]	Sci.[+] and Non-Ed, Non-Sci.	Education (field un-specified)	Education (Science[+])	Education (Non-Sci.[+])	Education, (Sci. and Non-Sci.[+] fields)
1957	A	2675	51.9	28.5	--	6.6	1.3	47.4	14.6	2.1	0.4
1960	A	1063**	37.9	27.6**	0.0	7.3*	--	61.0	2.6**	0.0	0.0
1964	A	903	30.1	20.6	0.1	5.0	0.0	60.4	13.0	1.3	0.0
1957	R	1756	44.9	23.6	--	10.0	1.6	48.1	13.5	2.7	0.5
1960	R	1157**	41.5	28.9**	0.0	8.5**	--	61.0	1.0**	0.0	0.0
1964	R	823	27.4	19.2	0.1	5.1	0.0	59.0	13.8	1.9	0.0
1957	A	2675	51.9	28.5	--	6.6	1.3	47.4	14.6	2.1	0.4
1957	R	1756	44.9	23.6	--	10.0	1.6	48.1	13.5	2.7	0.5
1960	A	1063**	37.9	27.6	0.0	7.3	--	61.0	2.6	0.0	0.0
1960	R	1157	41.5	28.9	0.0	8.5	--	61.0	1.0	0.0	0.0
1964	A	903*	30.1	20.6	0.1	5.0	0.0	60.4	13.0	1.3	0.0
1964	R	823	27.4	19.2	0.1	5.1	0.0	59.0	13.8	1.9	0.0

[+] See Table 7 footnote.

[++] No significance tests were computed for the 1957 data on this table; columns 3 and 4 indicate the sizes of the 1957 applicant groups who had the master's, while columns 5 through 12 reflect the majors of the 78% of acceptees and 79% of rejectees in 1957 who took graduate courses whether or not they attained the master's. The 1960 and 1964 data show the graduate majors only of those who did attain the master's.

attain the degree. Since all the majors discussed are graduate majors, common sense, if not statistical, comparisons may be made when referring to 1957.

Education was the most typical major for the master's in all groups, and a mathematics or science major was second, the reverse of the undergraduate situation. A science or mathematics major was more typical in 1957 and 1960 than in 1964. Education majors were approximately equal among the 1960 and 1964 applicants and there were about 25% more of them in these two years than in 1957.

Choice of graduate major did not appear to discriminate significantly for or against selection in 1960 or 1964 but a science or mathematics major in 1957 seemed to increase the probability of being accepted.

Highest degree earned (Table 9). The percentage of bachelor's degrees within each group increased with each succeeding year, while the percentage of master's degrees decreased. This finding is a reflection of the availability in 1964 of institutes for those with low levels of preparation in a field.

The numbers of doctorates were too small to have any meaning, although it may be noted that the percentages were the highest in 1957. In 1957 it was distinctly in an applicant's favor if he held a master's degree, rather than only a bachelor's. The reverse was true in 1960, although the results were not quite as reliable, indicating that those with just a bachelor's had a slightly better chance of being accepted. In 1964 an advanced degree did not distinguish significantly between acceptees and rejectees.

Recency of degrees (Table 10). Data on this item are available only for 1960 and 1964. Applicants in 1964 had held their bachelor's degree fewer years (A - 9.8; R - 8.6) before applying to the NSF summer institutes than had applicants in 1960 (A - 11.4; R - 11.6). Recency of the bachelor's did not distinguish between acceptees and rejectees in 1960, but in 1964 the more recently the degree was obtained, the greater the probability of rejection.

Recency of the master's degree did not appear to have an effect on selection either in 1960 or in 1964.

Employment Background

Main professional activity during the five years preceding application (Table 11). The predominant work background for all groups was, of course, teaching or supervising science and/or mathematics in high schools. This activity was significantly less typical of the 1964 rejectees than of the 1960, however.

In 1960, professional background did not appear to influence selection. In 1964, however, to have been involved in teaching mathematics or science increased the probability of acceptance, while non-science teaching, even though combined with science teaching, increased the probability of rejection.

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TABLE 9 HIGHEST DEGREE EARNED

Sample	Group	N	No Degree	Bachelor's Only	Master's	Doctor's
			Percentages			
1957	A	5154	0.8	47.3**	51.4**	0.5
1960	A	2805	1.4*	61.2**	37.8**	0.5
1964	A	3000	0.8	69.2	30.0	0.1
1957	R	3912	1.1	54.4*	44.0	0.5
1960	R	2787	1.3	57.2**	41.6**	0.1
1964	R	3000	0.9	71.7	27.2	0.3
1957	A	5154	0.8	47.3**	51.4**	0.5
1957	R	3912	1.1	54.4	44.0	0.5
1960	A	2805	1.4	61.2*	37.8*	0.5
1960	R	2787	1.3	57.2	41.6	0.1
1964	A	3000	0.8	69.2	30.0	0.1
1964	R	3000	0.9	71.7	27.2	0.3

Science and mathematics teaching experience (Table 12). The 1964 groups had significantly less teaching experience, on the average, than the 1960 groups in chemistry, physics and mathematics.

Number of years of teaching appeared to be significant in 1960 only in the case of chemistry, in which the longer the experience, the greater the probability of selection. In 1964 this variable appeared as a more definite factor, with acceptance more probable the greater the experience teaching biology, chemistry, physics, or mathematics.

Course schedule (Table 13). In 1957 and 1960 this item was categorized according to teaching schedules typified by a single subject or a combination of subjects. In 1964, the item was coded for chief teaching emphasis in a schedule. Statistical comparisons between years were not made, therefore.

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TABLE 10

RECENCY OF DEGREES[+]

Bachelor's				Master's			
Sample	Group	N with Bachelor's	Mean Number of Years Since Bachelor's	Sample	Group	N with Master's	Mean Number of Years Since Master's
1960	A	2743	11.4**	1960	A	1071	7.9
1964	A	2964	9.8	1964	A	913	7.9
1960	R	2743	11.6**	1960	R	1172	8.2*
1964	R	2961	8.6	1964	R	822	7.5
1960	A	2743	11.4	1960	A	1071	7.9
1960	R	2743	11.6	1960	R	1172	8.2
1964	A	2964	9.8**	1964	A	913	7.9
1964	R	2961	8.6	1964	R	822	7.5

[+] Data on this item did not appear in the 1957 study.

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TABLE 11 PREDOMINANT PROFESSIONAL ACTIVITY[+]
DURING FIVE YEARS PRIOR TO
APPLICATION

Sample	Group	No Entry	Adminis-tration	Sci. and/or Math	Non-Science, Non-Math	Non-Sci. and Science of Math
1960	A	0.3	1.1	83.2	0.7	14.4
1964	A	0.2	0.4	82.3	0.9	15.8
1960	R	0.5	0.6	85.3**	0.5	13.0**
1964	R	0.2	0.6	77.5	1.5	19.5
1960	A	0.3	1.1	83.2	0.7	14.4
1960	R	0.5	0.6	85.3	0.5	13.0
1964	A	0.2	0.4	82.3**	0.9	15.8**
1964	R	0.2	0.6	77.5	1.5	19.5

[+] A category, "working in, but not teaching science or mathematics," accounted for 0.2% each of the 1964 acceptees and rejectees and one individual in the 1960 acceptee group.

Course schedule appeared to influence selection slightly in 1957 only in the cases of "chemistry only" and "chemistry and physics and other science" schedules, where such schedules were in the applicant's favor, and in the schedule combining a non-science with science(s) or mathematics, which appeared to discriminate against the applicant.

In 1960, general-science-only and mathematics-only schedules were more typical of rejectees, while chemistry-only and physics-only were more typical of acceptees. In 1964, biology or chemistry as a chief teaching emphasis appeared to operate in the applicant's favor, while a mathematics-only schedule appeared to be undesirable.

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TABLE 12

SCIENCE AND MATHEMATICS TEACHING EXPERIENCE

Mean Number of Years+

Sample	Group	N	Biology	Chemistry	Physics	Mathematics	Earth Science	General Science	Other
1960	A	2805	3.0	2.6**	2.2**	5.1**	0.2	3.3	0.6
1964	A	3000	2.0	1.6	1.2	4.1	0.4	3.0	0.1
1960	R	2787	2.8	2.2**	2.0**	5.3**	0.3	3.2	0.5
1964	R	3000	1.7	1.2	0.9	3.8	0.4	2.8	0.1
1960	A	2805	3.0	2.6**	2.2	5.1	0.2	3.3	0.6
1960	R	2787	2.8	2.2	2.0	5.3	0.3	3.2	0.5
1964	A	3000	2.0**	1.6**	1.2*	4.1**	0.4	3.0	0.1
1964	R	3000	1.7	1.2	0.9	3.8	0.4	2.8	0.1

+The means shown on this table take into account the entire sample, including the very sizeable numbers who had no experience in a particular field. To see the average number of years of teaching experience among only those who did have experience in a field, see Table 27 (1964 data only).

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TABLE 13

COURSE SCHEDULE[+]

Sample	Group	N	Gen. Sci. only	Biol. only	Gen. Sci., Biol., & Other Sci.	Chem. only	Chem. or Phys. & Other Sci.	Phys. only	Chem. & Phys. & Other Sci.	Math only	Math & 1 or more Sci.	Non-Sci. & 1 or more Sci. or Math
			Percentages teaching in each category at time of application									
1957	A	5154	5.8	4.5	5.9	3.0	8.5	1.2	12.4	16.2	25.0	17.5
1960	A	2805	2.0	7.4	4.8	3.8	4.4	2.1	2.2	25.6	13.0	16.8
1964	A	3000	17.7	18.5		11.6		4.1		40.5		
1957	R	3912	6.7	3.8	6.2	2.2	7.6	1.1	8.5	16.0	23.6	24.3
1960	R	2787	3.4	7.3	5.2	2.6	2.2	1.3	2.0	31.1	11.9	16.8
1964	R	3000	19.4	13.9		7.9		2.7		44.3		
1957	A	5154	5.8	4.5	5.9	3.0*	8.5	1.2	12.4**	16.2	25.0	17.5**
1957	R	3912	6.7	3.8	6.2	2.2	7.6	1.1	8.5	16.0	23.6	24.3
1960	A	2805	2.0**	7.4	4.8	3.8**	4.4	2.1*	2.2	25.6**	13.0	16.8
1960	R	2787	3.4	7.3	5.2	2.6	2.2	1.3	2.0	31.1	11.9	16.8
1964	A	3000	17.7	18.5**		11.6**		4.1		40.5**		
1964	R	3000	19.4	13.9		7.9		2.7		44.3		

[+] Categories included in the 1960 study but not in the 1957 study are: "No Courses Listed", "Earth Science Only", "General Science and Special Science (not Biology) and/or Mathematics","Chemistry and Physics", "Biology and Science (not Chemistry or Physics)", and "Other Courses". Consequently, about 19% of the 1960 A's and 16% of the 1960 R's are not represented on this chart.

In 1957 and 1960 this item was categorized according to teaching schedules typified by a single subject or a combination of subjects. In 1964, the item was coded for the chief teaching emphasis in a schedule and included the additional categories, "Earth Science", "Social Science", and "Non-Science". Statistical comparisons were therefore not made between years. For 1964, read "only" as "chief emphasis".

The only distinct trend for the three years with regard to course schedule as a factor in selection appears in the consistent favoring of applicants with chemistry-only schedules. The percentages who fit in this category, however, are relatively small (A - 3.0 to 11.6%; R - 2.2 to 7.9%). A tendency seen in 1960 and 1964 is for a mathematics-only schedule to increase the probability of rejection. On the whole, however, the course schedules or chief teaching emphases important to selection vary from year to year.

Certification status (Table 14). The largest proportion of all groups were fully accredited for secondary school teaching, but a substantial number had provisional or temporary certification. There were significantly fewer applicants with temporary credentials in 1964 than in 1960 (1960: A's - 23.7%, R's - 25.5%; 1964: A's - 12%, R's - 17.6%).

In 1960, full or provisional accreditation did not seem to be an issue in selection, but in 1964, a permanent secondary credential significantly increased the probability of acceptance.

Professional Interests

Professional journals read regularly (Table 15). The category of journals reported most frequently in 1957 was "education journals only", while a combination of education and general science journals was more typical of the 1960 and 1964 groups. More applicants were also reporting a combination of special science, general science and education journals in 1960 and 1964 as compared to 1957, so the need for professional enlargement beyond education materials apparently has made itself felt in recent years.

The reading of professional journals appeared to be a factor in selection in 1957, perhaps because this variable was correlated with other professional characteristics more directly responsible as selection criteria. Reporting only education journals or only general science journals seemed to operate against the applicant, while reporting a combination of journals including a special science type, seemed to work in his favor. This latter combination also appeared in favor of the applicant in 1964, but aside from that, the professional journal item did not distinguish between acceptees and rejectees in 1960 or 1964.

Membership in professional organizations -- type (Table 16). The larger proportion of applicants in all three years was affiliated with education organizations. Membership in either a special science or a general science organization in addition to education organizations was held by approximately 16% of the acceptees in 1960 and 15% in 1964, and by about 14% of the rejectees in 1960 and 12.5% in 1964. With the exception of representation in the education-only category, which increased among rejectees from 1960 to 1964, there was no significant increase or decrease in membership in any particular type of organization. (The membership types in 1957 were cross-tabulated as national and regional, two overlapping categories, and therefore were not used in the comparisons.)

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TABLE 14

CERTIFICATION STATUS

Sample	Group	N	No Credential	Temporary Elementary	Temporary Secondary	Permanent Elementary	Permanent Secondary	More than one Credential
1960	A	2805	5.4**	0.1	23.7**	0.7	63.0**	7.0
1964	A	3000	3.9	0.0	12.0	0.2	83.2	0.2
1960	R	2787	4.0	0.2	25.5**	0.7	61.5**	8.0
1964	R	3000	3.2	0.0	17.6	0.3	78.6	0.1
1960	A	2805	5.4**	0.1	23.7	0.7	63.0	7.0
1960	R	2787	4.0	0.2	25.5	0.7	61.5	8.0
1964	A	3000	3.9	0.0	12.0**	0.2	83.2**	0.2
1964	R	3000	3.2	0.0	17.6	0.3	78.6	0.1

TABLE 15

High School Teachers at the 1957, 1960, and 1964 Summer Institutes

PROFESSIONAL JOURNALS READ

Sample	Group	N	None	Educ.[+]	Spec. Sci.	Educ.[+] and Spec. Sci.	Gen. Sci.	Educ.[+] and Gen. Sci.	Spec. & Gen. Sci.	Spec. Sci., Gen. Sci. & Education[+]
				Percentage of Applicants in Each Category						
1957	A	5154	4.4	37.9**	1.5**	8.3**	5.2**	28.1**	3.6	10.9**
1960	A	2805	3.2	28.6	0.5	6.1	7.8	37.8	2.9	13.1
1964	A	3000	3.3	20.0	0.4	5.3	8.0	36.4	3.1	13.7
1957	R	3912	6.7**	40.4**	1.4*	7.3**	6.6*	27.3**	2.9	7.4**
1960	R	2787	2.8**	30.6	0.8	5.4	8.1*	36.2	3.4	12.7**
1964	R	3000	4.7	31.4	1.1	5.5	9.7	34.7	2.9	10.0
1957	A	5154	4.4**	37.9*	1.5	8.3	5.2**	28.1	3.6	10.9**
1957	R	3912	6.7	40.4	1.4	7.3	6.6	27.3	2.9	7.4
1960	A	2805	3.2	28.6	0.5	6.1	7.8	37.8	2.9	13.1
1960	R	2787	2.8	30.6	0.8	5.4	8.1	36.2	3.4	12.7
1964	A	3000	3.3	30.0	0.4	5.3	8.0	36.4	3.1	13.7**
1964	R	3000	4.7	31.4	1.1	5.5	9.7	34.7	2.9	10.0

[+] In 1964, the category "science-education" was added to the journal types. For this table, the percentages for science-education journals were combined with those for education journals in all relevant categories.

High School Teachers at the 1957, 1960, and 1964 Summer Institutes

TABLE 16 MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS -- TYPE[+]

Sample	Group	N	Geog. Extent	None	Educ.[++] only	Spec. Sci. only	Educ. & Spec. Sci.	Gen. Sci. only	Educ. & Gen. Sci.	Spec. Sci. & Gen. Sci.	Spec. Sci., Gen. Sci. & Educ.
				Percentage of Applicants in Each Category							
1957	A	5154	Regional	19.2	68.0	0.8	3.0	1.5	6.8	0.2	0.5
1957	A	5154	National	27.2	57.1	1.8	4.8	2.1	5.6	0.4	1.0
1960	A	2805	Not Applicable	8.5	72.1	0.7	7.8	1.1	8.0	0.2	1.6
1964	A	3000		8.0	73.7	1.0	7.6	0.8	7.2	0.2	1.7
1957	R	3912	Regional	26.5	64.2	0.7	2.8	1.1	4.0	0.3	0.4
1957	R	3912	National	36.4	52.0	1.7	4.2	1.4	3.3	0.4	0.6
1960	R	2787	Not Applicable	8.4	72.7*	1.1	6.5	1.3	7.9	0.4	1.7
1964	R	3000		9.1	75.5	0.6	6.2	1.0	6.3	0.2	1.2
1957	A	5154	Regional	19.2**	68.0**	0.8	3.0	1.5	6.8**	0.2	0.5
1957	R	3912		26.5	64.2	0.7	2.8	1.1	4.0	0.3	0.4
1957	A	5154	National	27.2**	57.1**	1.8	4.8	2.1	5.6**	0.4	1.0
1957	R	3912		36.4	52.0	1.7	4.2	1.4	3.3	0.4	0.6
1960	A	2805		8.5	72.1	0.7	7.8	1.1	8.0	0.2	1.6
1960	R	2787		8.4	72.7	1.1	6.5	1.3	7.9	0.4	1.7
1964	A	3000		8.0	73.7	1.0	7.6	0.8	7.2	0.2	1.7
1964	R	3000		9.1	75.5	0.6	6.2	1.0	6.3	0.2	1.2

[+] The 1957 study tabulated the frequencies in each organization type separately for regional and national organizations. The 1960 and 1964 data are categorized according to type, and to geographic extent, but not cross-tabulated. Hence, statistical comparisons were not made with the 1957 data.

[++] In 1964, the category "science-education" was added to the organization types. For this table, the percentages for science-education organizations were combined with those for education organizations in all relevant categories.

Professional affiliations, or lack of them, appeared to have some influence on selection in 1957, but did not in 1960 and 1964. In 1957 an indication of no membership increased the probability of rejection, while membership in education and/or general science organizations tended to favor selection. A slight tendency, not one that is statistically significant, is seen for education memberships, unless accompanied by special science or general science memberships, to have operated against the applicant in 1964.

Membership in professional organizations -- geographic extent (Table 17). Professional affiliations increased slightly within the acceptee groups from 1960 (91.5%) to 1964 (92%), and decreased slightly within the rejectee groups (1960 - 91.6%; 1964 - 90.9%). These changes are not statistically reliable.

The larger proportion of all groups were affiliated with both national and regional organizations. "Regional membership only" decreased among acceptees from 1960 to 1964.

In 1957, membership in either regional or national organizations increased the probability of selection. In 1960 and 1964 this was true for membership in national organizations, and in 1964 also, for membership in a combination of regional and national organizations. Having only regional affiliations in 1964 worked against the applicant. A progression may be observed from favoring any professional affiliation whether local or national, to a bias in favor of membership in multiple and widespread organizations.

Previous institute attendance (Table 18). Attendance at NSF institutes increased significantly along with the increased number of institutes offered with each year studied. At the same time, attendance of the applicant groups at non-NSF institutes decreased significantly with each year.

In 1960, previous NSF institute attendance increased the probability of rejection. Recent-participant rejectees were not studied in 1964, but it is assumed that recent participation would again work against the applicant, unless he were enrolled in a sequential institute.

SUMMARY

Personal variables that distinguished one year's applicants from another included age and number of dependents. As a group, the 1964 applicants were younger and had fewer dependents, on the average, than the 1960 applicants.

With regard to educational background, number of undergraduate credits in physics and chemistry decreased significantly with each year, but graduate credits in each of the five sciences markedly increased from 1957 to 1964 for the accepted group. The 1960 group of applicants had higher grade-point averages than did the 1964 group in all subjects but education and biology.

TABLE 17

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS -- GEOGRAPHIC EXTENT

Sample	Group	N	No Organizations	Regional Organizations	National Organizations	National & Regional
			Percentage of Applicants in Each Category			
1957	A	5154		80.8	72.8	--
1960	A	2805	8.5	23.4*	6.4	61.6
1964	A	3000	8.0	21.1	7.3	63.6
1957	R	3912		73.5	63.6	--
1960	R	2787	8.4	25.7	5.0	61.0
1964	R	3000	9.1	25.2	6.0	59.8
1957	A	5154		80.8**	72.8**	--
1957	R	3912		73.5	63.6	--
1960	A	2805	8.5	23.4	6.4*	61.6
1960	R	2787	8.4	25.7	5.0	61.0
1964	A	3000	8.0	21.1**	7.3*	63.6**
1964	R	3000	9.1	25.2	6.0	59.8

+The 1960 and 1964 data were distributed in categories of "Regional Organizations Only" and "National Organizations Only." In the 1957 study, however, there was considerable overlap in the regional and national categories. Tests of significance of difference were not made between the 1957 and 1960 percentages

High School Teachers at the 1957, 1960, and 1964
Summer Institutes

TABLE 18 PREVIOUS INSTITUTE ATTENDANCE[+]

Sample	Group	N	NSF	Non-NSF[++]
			Percentage of Applicants in Each Category	
1957	A	5154	2.1**	16.4**
1960	A	2805	46.7**	9.5**
1965	A	3000	57.1	5.4
1957	R	3912	2.0**	14.6**
1960	R	2787	51.3	9.3
1957	A	5154	2.1	16.4*
1957	R	3912	2.0	14.6
1960	A	2805	46.7**	9.5
1960	R	2787	51.3	9.3

[+] Recent participant rejectees were not included in the 1964 sample, and the item was not coded for rejectees who had attended NSF institutes prior to 1962.

[**] Note that there may be overlapping between the NSF and Non-NSF categories.

The percentage of undergraduate majors in education increased with each succeeding year, while science or mathematics majors decreased. The percentage of applicants with the bachelor's as the highest degree earned increased with each year.

Few professional background variables distinguished between years. More applicants in 1964 than in 1960 had had recent experience teaching a combination of non-science subjects and science or mathematics. This difference was significant between the two rejected groups. There were fewer applicants with provisional credentials in 1964 than in 1960.

Only a moderate amount of consistency appeared in the variables that affected selection from year to year. Number of dependents discriminated against applicants only in 1960; age appeared to favor applicants only in 1964.

The trend in selection in all three years was to favor those with the higher grades. In 1964, the higher the number of graduate credits in any subject, the greater the likelihood of being accepted. This was not true in 1960.

In all three years selection tended to favor those with a science or mathematics undergraduate major, but, although a graduate major in these fields was advantageous in 1957, choice of graduate major did not affect selection in 1960 or 1964.

The probability of acceptance was increased in 1964 when the applicant had teaching experience in biology, physics, chemistry, or mathematics. This was true only for chemistry in 1960. A distinct trend did appear in all three years favoring applicants whose chief teaching emphasis was chemistry. Professional interests, on the whole, did not seem to enter significantly into selection. A progression was noted however, from favoring those with any professional affiliation, whether local or national, in 1957, to favoring membership in a combination of regional and national organizations.

Academic performance and a professional orientation toward science and mathematics, not surprisingly, appeared to form the strongest and most consistent criteria for selection in 1957, 1960, and 1964.

Chapter 3

THE SUMMER INSTITUTES FOR ELEMENTARY SCHOOL TEACHERS

Thirty-six summer institutes designed specifically for elementary school teachers were held in 1964. A study was made of 800 acceptees and rejectees of these institutes. The acceptees were composed of 457 males and 343 females, and the rejectees, of 475 males and 325 females. The applications were made largely to mathematics and general science institutes.

GENERAL CHARACTERISTICS

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Age	38.0 years		38.8 years	
Marital status	Married	(71.6%)	Married	(74.3%)
No. of dependents	2.0⁺	3.0⁺⁺	2.1⁺	2.9⁺⁺
No. of dependent's allowances	1.8⁺	2.7⁺⁺	1.9⁺	2.7⁺⁺
Most undergraduate credits	Education	(25.2 hours)	Education	(26.5 hours)
Most graduate credits	Education	(16.3 hours)	Education	(13.4 hours)
Highest grades				
undergraduate:	Education	(3.0)	Education	(2.9)
graduate:	Education	(3.3)	Education	(3.2)
Highest degree	Master's Bachelor's	(51.0%) (46.4%)	Bachelor's Master's	(55.9%) (39.6%)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

Variable	Modal or Mean Responses			
	Acceptees		Rejectees	
Most frequent major				
Bachelor's:	Education	(55.3%)	Education	(57.1%)
Master's:	Education	(90.6%)	Education	(93.8%)
(Per cents are of number having the degree)				
Recency of degrees				
Bachelor's	11.8 years		10.6 years	
Master's	7.4 years		6.6 years	
Chief teaching emphasis	Non-science	(58.8%)	Non-science	(71.4%)
	Administration	(25.8%)	Administration	(16.0%)
	General science	(7.6%)	Mathematics	(7.1%)
Professional experience past 5 years	Teach elementary non-sci. & sci./math	(63.5%)	Teach elementary non-sci. & sci./math	(65.5%)
Teaching experience in elementary schools	4.29 years		4.58 years	
Total enrollment of school where applicant taught	500-999	(37.4%)	500-999	(39.5%)
Mean number of institutes attended				
NSF Summer:	0.2^{+}	1.2^{++}	--	
Total NSF:	0.3^{+}	1.2^{++}	--	
Professional journals	Education only	(34.1%)	Education only	(36.1%)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

Variable	Modal or Mean Responses: Acceptees		Modal or Mean Responses: Rejectees	
Professional affiliations				
Type:	Education only	(27.5%)	Education only	(73.8%)
Geographic extent:	National and regional	(75.8%)	National and regional	(65.0%)
Certification status	Permanent elementary	(86.8%)	Permanent elementary	(79.0%)
Certification deficiency	Elementary education	(2.0%)	Elementary sci./math	(4.5%)

DESCRIPTION AND ANALYSIS OF THE DATA

Location of Schools Where Applicants Taught

City (Table A-8). Communities with populations of under 1/4 million, who accounted for 78.6% of the U.S. population in 1960, contributed 85.1% of the applicants in the elementary teacher sample. Cities with populations between 1/4 and 1/2 million, which made up 5.9% of the U.S. population, contributed 6.7% of the applicants, and the cities with populations of 1/2 million or more, which accounted for 15.5% of the U.S. population, contributed 8.5% of the applicants. The distributions of acceptees and rejectees in these categories were very close, but looking at individual cities, the ratio of acceptees to rejectees was very high for New York and Honolulu, and was low for Detroit.

State (Tables 21 and A-9). State where an applicant taught had a good deal to do with whether or not he became a participant, perhaps because of proximity or lack of it of the available institutes for elementary teachers. It was helpful, in 1964, to have been teaching in Pennsylvania and New York, but it decreased chances for acceptance if one was from Kansas, Illinois, Iowa, Michigan, Ohio, or Washington. In 1960, the situation differed. Then, a teaching location in California was advantageous, and in Florida or North Carolina it was not.

Region (Tables 21 and A-10). The regions contributing the most applicants were East North Central, Pacific West, and West North Central, in that order. In 1964, applicants from the Middle Atlantic region had an advantage in selection, but applicants from the East and West North Central regions were at a slight disadvantage. In 1960, teaching in the Pacific West region favored the applicant, while South Atlantic and East South Central teaching locations worked against him.

MEAN NUMBER OF SEMESTER HOURS[++]

	Biology		Chemistry		Physics		Mathematics		Earth Science		Education	
	A	R	A	R	A	R	A	R	A	R	A	R
Undergraduate	7.97	8.30	2.88	2.53	2.24	1.97	6.88**	6.17	3.34	3.13	25.22	26.47
Graduate	.68*	.45	.22**	.07	.40**	.11	1.35**	1.04	.79**	.43	16.26**	13.36

Undergraduate semester hours or credits[+] (Tables 22 and A-11 to A-18). The highest number of undergraduate credits was observed for education, with an average of 25.2 hours per acceptee and 26.5 hours per rejectee. Biology and mathematics were next in average number of credits, and physics and chemistry were least. Mathematics credits increased somewhat the probability of selection and was the only undergraduate subject observed to do so.

Graduate semester hours or credits[+] (Tables 23 and A-19 to A-26). Graduate credits were a significant factor in selection. In every graduate subject, including education, the acceptees had the higher average number of credits. In 1960 as in 1964, education was by far the most typical graduate field, but in 1960 the rejectees had the greater number of education credits.

[+] Courses in engineering will not be discussed for this sample.

[++] Credits in the sciences and mathematics for elementary school teachers usually refer to science- or mathematics-oriented education courses, e.g., "physics" for "physical science".

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: ELEMENTARY

(The states of Hawaii and Alaska are in the Pacific division and the West region.)

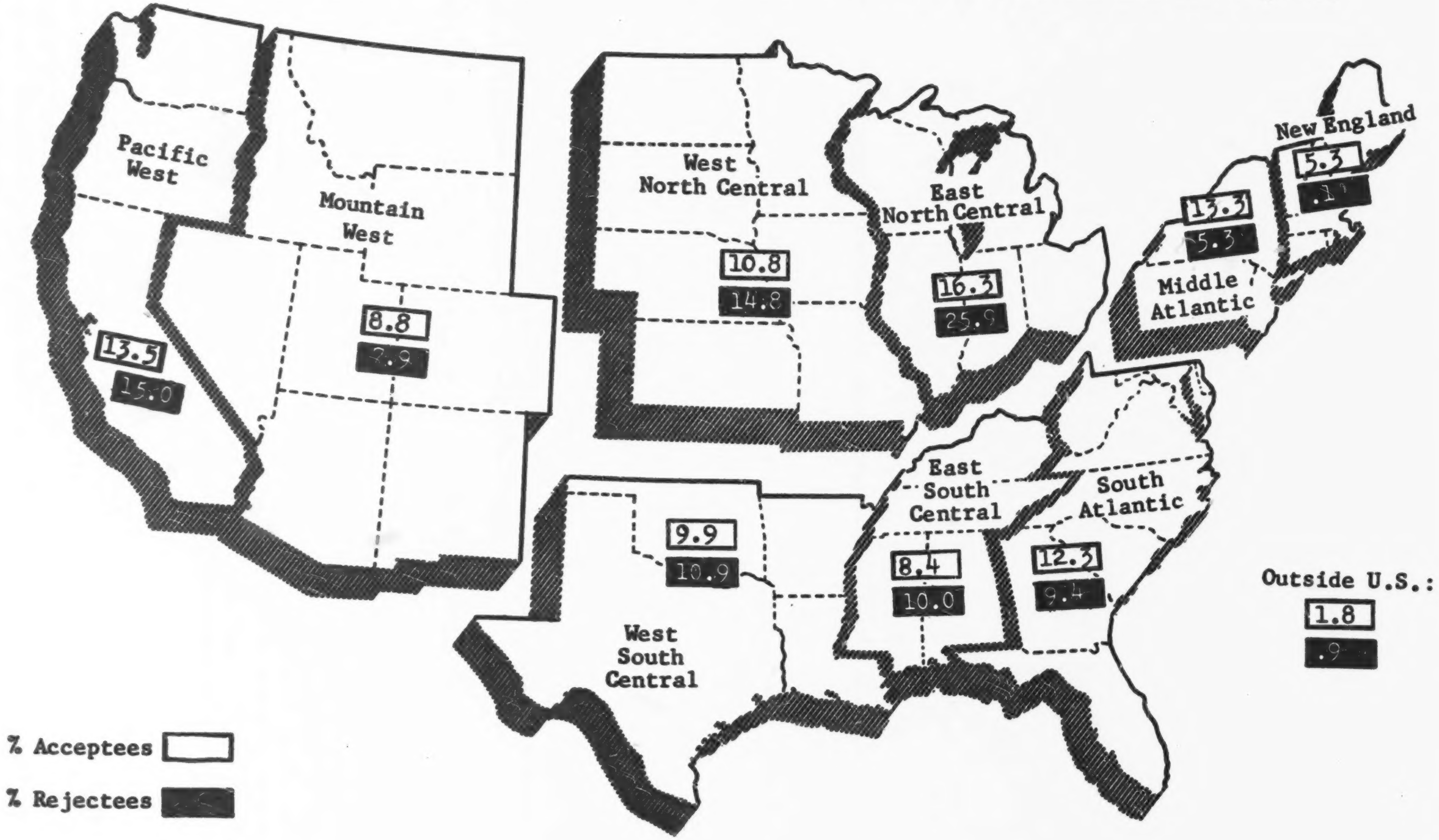
Pacific West
13.5
15.0
Mountain West
8.8
7.9
West North Central
10.8
14.8
East North Central
16.3
25.9
Middle Atlantic
13.3
5.3
New England
5.3
.1
West South Central
9.9
10.9
East South Central
8.4
10.0
South Atlantic
12.3
9.4
Outside U.S.:
1.8
.9
% Acceptees
% Rejectees

Figure 1

MEAN GRADE-POINT AVERAGES

Biology		Chemistry		Physics		Mathematics		Earth Science		Education	
N	M	N	M	N	M	N	M	N	M	N	M
Undergraduate											
693	2.59*	280	2.36**	270	2.44*	655	2.63**	400	2.72*	723	3.03**
695	2.51	275	2.13	242	2.30	637	2.44	385	2.62	756	2.91
Graduate											
79	3.09	26	3.18	45	3.11*	164	3.18**	102	3.21	545	3.29**
56	3.02	9	2.69	17	2.56	136	2.97	66	3.11	462	3.21

Undergraduate and graduate grades (Tables 24 and 25, and A-27 to A-33). The mean undergraduate grade-point averages ranged from C+ to B, and the graduate from B- to B+. The highest grades were seen for education, in which acceptees averaged 3.0 and 3.3, and rejectees averaged 2.9 and 3.2, in undergraduate and graduate courses, respectively. The lowest grades were in chemistry and physics. The acceptees had higher grades than the rejectees for every subject. These differences were reliable for all undergraduate courses and for graduate courses in physics, mathematics, and education, indicating that, for the most part, good grades increased the probability of selection at the 1964 institutes. In 1960, only undergraduate grades in biology distinguished between acceptees and rejectees.

Major subject for Bachelor's (Table A-47). The bachelor's degree was held by 97.6% of the acceptees and 95.5% of the rejectees. The most typical major for both groups was in education. A science or mathematics major was reported by only 7.7% of the acceptees and 5.3% of the rejectees, while an undergraduate major in a non-science subject was reported almost three times as often.

Major subject for Master's (Table A-48). The master's degree was held by 51.6% of the acceptees and 40.5% of the rejectees. Most of the majors were in education, and major subject for the master's did not distinguish between acceptees and rejectees.

Highest degree earned (Table A-50). Four acceptees and 5 rejectees in the sample had the doctorate. A master's degree as highest degree earned was to an applicant's advantage, while a bachelor's degree as the highest tended to decrease the chances of selection. The master's as the highest degree earned was held by 51% of the acceptees and by 39.6% of the rejectees.

Recency of degrees (Tables 26, A-51, and A-52). It appeared to be in an applicant's favor to have held his degrees a comparatively long time. The rejected group had earned their bachelor's and master's degrees more recently, on the average than had the acceptees.

	Mean number of years since:	
	Bachelor's	Master's
Acceptees	11.82	7.41
Rejectees	10.87	6.61

Employment Background

Number of years of experience teaching specific subjects (Tables 27 and A-61 to A-67). Teaching experience in mathematics and general science was greater than for any other subject, whether the entire group or whether just those with experience in the pertinent fields were being observed. Surprisingly, teaching experience in mathematics or general science tended to work somewhat against chances of selection.

Although only small proportions of the elementary teacher applicants had had experience teaching biology, chemistry, physical science, or earth science, those who did averaged from approximately 4 to 7 years in the field. These subjects, of course, were at the elementary level.

Professional experience during past five years (Table A-68). Teaching a number of subjects, including non-science, science, and mathematics at the elementary school level was, predictably, the most common background among the elementary teacher applicants. A fair-sized proportion, 20% of the acceptees and 11.6% of the rejectees, had been doing administrative work. Those who had been were more likely to be accepted than rejected.

Teacher certification (Tables A-69 and A-70). Permanent elementary credentials were held by 82.9% of the applicants and temporary or provisional elementary credentials by only 4.3% of the applicants. Permanent accreditation was in the applicant's favor. Secondary teaching credentials were held by 8.2% of the acceptees and 11.8% of the rejectees. Most of these were permanent.

Certification deficiencies were reported by 6.3% of the acceptees and 13.6% of the rejectees. Most of the deficiencies were in education, science, or mathematics. A deficiency in science or mathematics tended to work against the applicant.

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

Sample: Elementary

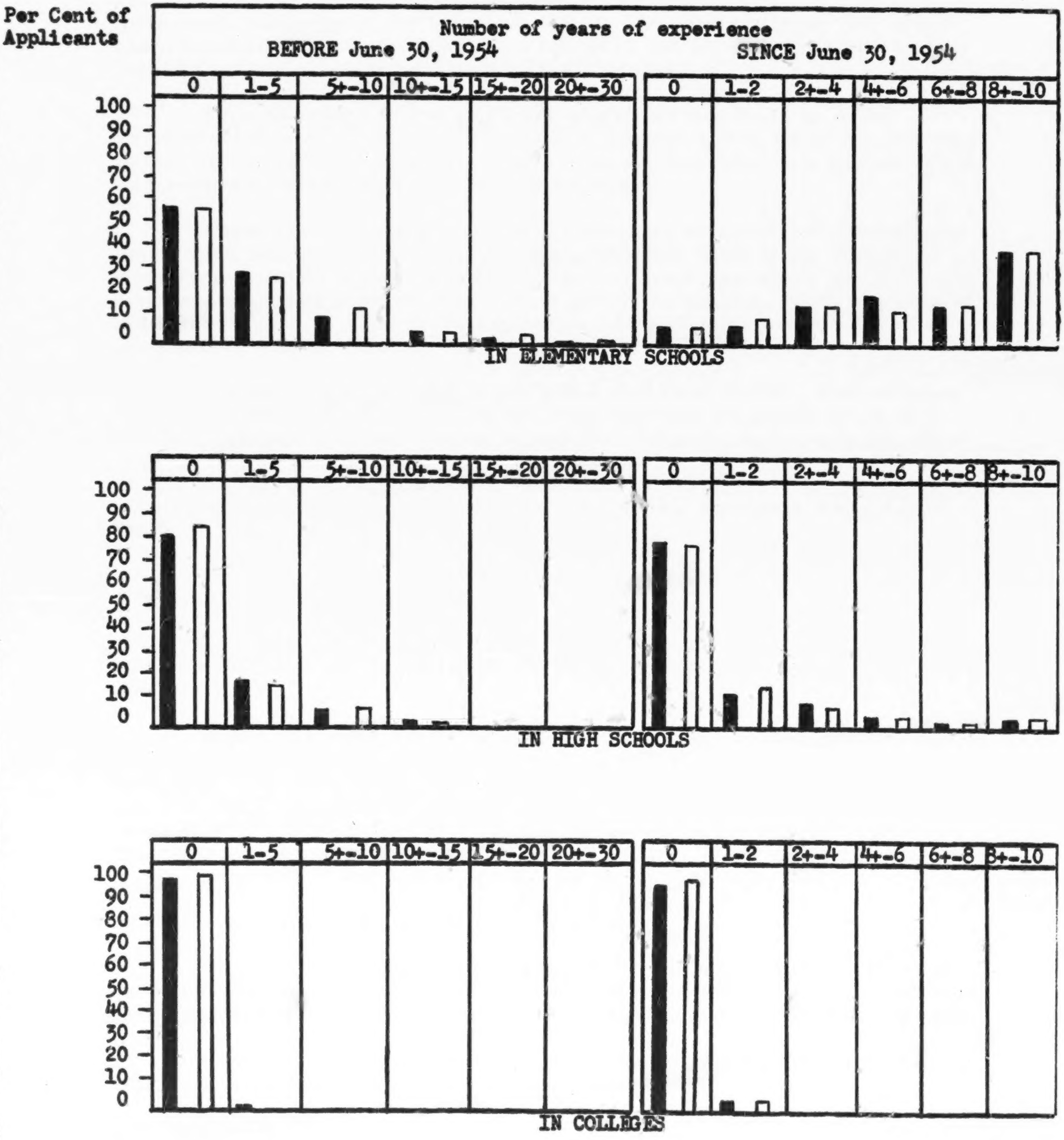

Figure 2

Present position (Table A-71). Teachers comprised the larger part of the accepted and rejected groups. About 27% of the acceptees and 18.5% of the rejectees were involved in purely administrative positions (principal, supervisor, or superintendent). An administrator had better chances of being accepted than did a teacher, but nevertheless, those involved in teaching made up 71.6% of the sample.

Type of school where applicant taught (Tables A-72 to A-74). Private schools contributed 6.2% of the acceptees and 9.1% of the rejectees in this sample of elementary school teachers. Teaching in a private school was somewhat disadvantageous to the applicant.

About 1/5 of the applicants were teaching at combined elementary-junior high schools and 7.1% of the acceptees and 9.4% of the rejectees were from schools where all the grades from kindergarten to twelfth were represented. The greater part of both groups of course, were teaching at elementary schools, and these applicants had a greater probability of selection than did the others.

Present teaching emphasis (Tables A-75 and A-76). Non-science subjects were most often seen as the chief teaching emphasis in an elementary teacher's weekly course schedule. Administration was the chief occupation for 25.8% of the acceptees and 16% of the rejectees. For the 75.2% of acceptees and 83.6% of rejectees who reported teaching or supervising more than one subject, the second teaching emphasis was usually mathematics.

Previous Institute Attendance*

NSF Summer Institutes (Table A-77). Previous attendance at one summer institute was reported by 15.6% of the acceptees, and at two or more by 3.5%.

Other NSF programs (Tables A-78 to A-82). In-Service institutes had been attended by 4.6% of the acceptees and Academic Year institutes by 1.4%. Two individuals had been involved in the Research Participation and 5 in the Fellowship programs. Of the 23.9% who had participated in some NSF activity, most did so once. However, 4.3% of the acceptees had attended two or more NSF program sessions.

Host Universities Attended for NSF Programs

Number of universities attended (Tables A-84 to A-90). Most of those who participated in NSF programs did so at one university. Two and three universities for NSF activities were reported by 2.7% of the sample.

Consecutive attendance at the same university for two or more NSF activities was reported by 2% of the acceptees.

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*Only acceptees were studied for these items.

Professional Interests

Professional journals read regularly (Table A-91). The most typical classifications of journals reported by the elementary teacher sample were "Education Journals Only" or combinations of education, science-education, and general science journals. Only 2.3% of the acceptees and 4.2% of the rejectees had been reading general science and/or special science journals exclusively.

Membership in professional organizations (Tables A-92 and A-93). Membership in strictly education organizations accounted for almost 75% of the applicants. A combination of education and science-education memberships were reported by 11.6% of the acceptees and 6% of the rejectees. However, any sort of professional affiliation was in the applicant's favor at these institutes.

Affiliations that were both national and regional, observed for 75.8% of the acceptees and 65% of the rejectees, were significantly in an applicant's favor.

ELEMENTARY TEACHERS - SUMMARY OF DIFFERENCES BETWEEN ACCEPTEES AND REJECTEES

Personal variables did not appear to influence selection at institutes for elementary school teachers. Almost everything else did, however. Location of an applicant's residence was important, the Middle Atlantic states being advantageous and the East and West North Central states disadvantageous. Academic performance was important, particularly with respect to graduate credits in all subjects, and to undergraduate and graduate grades. To have an advanced degree also increased the probability of selection. This finding could be related to the fact that a fair-sized proportion of the acceptee group were administrators, who would be expected to have advanced degrees.

Professional background was also influential in selection. To have been teaching elementary grades only at a public school and to be fully accredited at the elementary school level was in an applicant's favor. Unexpectedly, teaching experience in general science or in mathematics operated somewhat against the applicant.

Membership in professional affiliations, whether with an education emphasis or not was in an applicant's favor, but the geographic extent of his affiliations (preferably both regional and national), seemed to be related to factors important to selection.

Chapter 4

THE UNITARY SUMMER INSTITUTES FOR SECONDARY SCHOOL TEACHERS

I. Low Preparation Level

In 1964, 291 unitary summer institutes were offered, approximately 40% of which were for participants with little or no preparation in the specified field. The kind of institute at this level accounting for the majority of the participants were multiple fields (34%), mathematics (20%), general science (14%), and earth science (11%). (See Table A-1.) The Secondary Unitary Low sample was composed of 800 acceptees and 800 rejectees. There were 630 males and 170 females in the accepted group, and 673 males and 127 females in the rejected group.

GENERAL CHARACTERISTICS

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Age	35.1 years		34.5 years	
Marital status	Married	(76.0%)	Married	(78.1%)
No. of dependents	2.0^{+}	2.8^{++}	2.0^{+}	2.8^{++}
No. of dependent's allowances	1.9^{+}	2.7^{++}	2.0^{+}	2.6^{++}
Most undergraduate credits	Education	(20.8 hours)	Education	(21.7 hours)
Most graduate credits	Education	(8.8 hours)	Education	(8.1 hours)
Highest grades undergraduate:	Education	(2.94)	Education	(2.88)
graduate:	Education	(3.13)	Education	(3.15)
Highest degree	Bachelor's Master's	(66.5%) (30.4%)	Bachelor's Master's	(70.4%) (27.5%)

$^{+}$Total-group mean

$^{++}$Mean for those with non-zero responses

General Characteristics (continued)

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Most frequent major of those who earned				
Bachelor's:	Science or math	(37.8%)	Science or math	(30.3%)
Master's:	Education	(20.4%)	Education	(18.6%)
Recency of Bachelor's	10.4 years		9.3 years	
Recency of Master's	7.7 years		7.5 years	
Chief teaching emphasis	General science	(32.1%)	Mathematics	(34.5%)
	Mathematics	(30.1%)	General science	(27.8%)
	Biology	(14.6%)	Non-science	(15.8%)
Professional experience past 5 years	High school science and/or math	(68.9%)	High school science and/or math	(66.1%)
Years of teaching experience in secondary schools	3.42		3.27	
Total enrollment of school where applicant taught	500-999	(33.8%)	500-999	(33.3%)
Mean number of institutes attended				
NSF Summer:	0.4[+]	1.3[++]	--	
Total NSF:	0.6[+]	1.6[++]	--	
Professional journals	Both education and science	(32.7%)	Both education and science	(29.7%)
Professional affiliations				
Type:	Education only	(47.1%)	Education only	(48.9%)
Geographic extent:	National and regional	(59.1%)	National and regional	(57.5%)
Certification status	Permanent secondary	(86.0%)	Permanent secondary	(78.0%)
Certification deficiency	No deficiency	(80.3%)	No deficiency	(76.6%)
	Secondary sci. or math	(14.1%)	Secondary sci. or math	(14.1%)

[+] Total-group mean

[++] Mean for those with non-zero responses

DESCRIPTION AND ANALYSIS OF THE DATA

Personal Variables

Age (Tables 19 and A-3) and marital status (Table A-5) did not distinguish between acceptees and rejectees.

Number of dependents and dependent's allowances (Tables 20, A-6, and A-7). A significantly larger proportion of the accepted group (28%) than of the rejected group (25.5%) had no dependents. Mean number of allowances requested was 1.9 for the acceptees and 2.0 for the rejectees. A larger proportion of the acceptees (28%) than of the rejectees (25.5%) had no dependents.

Location of Schools Where Applicants Taught

City (Table A-8). A greater proportion of acceptees (7.4%) than of rejectees (5.2%) taught in cities with populations over 1/2 million. According to 1960 census figures, the proportion of the U. S. population living in such cities is 15.5% A higher percentage of rejectees (89.9%) than acceptees (85.9%) taught in communities with populations under 1/4 million; such communities accounted for 78.6% of the U. S. population in 1960. Cities with populations between 1/4 and 1/2 million, which accounted for 5.9% of the U. S. population in 1960, yielded 7% of the acceptees and 5% of the rejectees.

State (Tables 21 and A-9). A higher ratio of acceptees to rejectees was observed for Hawaii, Missouri, and Ohio, and a higher ratio of rejectees to acceptees was observed for New York. These may have been chance differences. None was statistically reliable.

The distributions of acceptees and rejectees over the states follow fairly closely the distribution of junior and senior high school science and mathematics teachers in 1964-65.[+] Differences between percentages of all science teachers and institute applicants were usually under 2%.

Region (Tables 21 and A-10). The East North Central region yielded the greatest number of applicants (18% of the acceptees and 15.9% of the rejectees). The West South Central region contributed significantly fewer acceptees (10.3%) than rejectees (13.5%) to these institutes.

[+] Registry of Junior and Senior High School Science and Mathematics Teachers, NSTA, NEA, 1964-1965.

Region	Estimated Percentage of Total U. S. Junior and Senior High School Science and Mathematics Teachers	Per Cent of Secondary Unitary Low Institutes' Acceptees	Per Cent of Secondary Unitary Low Institutes' Rejectees
New England	6.48	5.3	5.5
Middle Atlantic	16.04	12.3	13.8
East North Central	18.00	18.1	15.9
West North Central	10.14	8.8	8.6
South Atlantic	15.34	16.8	16.6
East South Central	7.50	5.8	5.9
West South Central	12.21	10.3	13.5
Mountain West	4.63	6.6	5.6
Pacific West	9.64	12.8	11.1
Outside U. S.		3.5	3.5

Educational Background

Undergraduate semester hours or credits[+] (Tables 22 and A-11 to A-18). Most of the applicants reported some credits in biology, chemistry, physics, mathematics, earth science, and education. The highest average number of credits was in education. The lowest average number of credits for both groups was in earth science. Acceptees had a higher average number of credits than did rejectees in biology, chemistry, and in all the sciences considered together.

Graduate credits (Tables 23 and A-19 to A-26). About 52% of the acceptees and 47.5% of the rejectees reported graduate credits in education. The largest mean numbers of graduate credits for both groups were in education (A's - 8.8 hours; R's - 8.1 hours), biology (A's - 2 hours; R's - 1.6 hours), and mathematics (A's - 1.1 hours; R's - 1.3 hours). Graduate credits were not observed to distinguish between acceptees and rejectees.

Undergraduate grades (Tables 24 and A-27 to A-33). The mean undergraduate grade-point averages ranged from C+ to B- for both groups. Both groups obtained their highest grades, on the average, in education, and their lowest average grades in physics. Acceptees had higher average grades than rejectees in all subjects, and were significantly higher in biology and education.

[+] Engineering courses will not be noted for the secondary institute groups.

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: SECONDARY UNITARY LOW

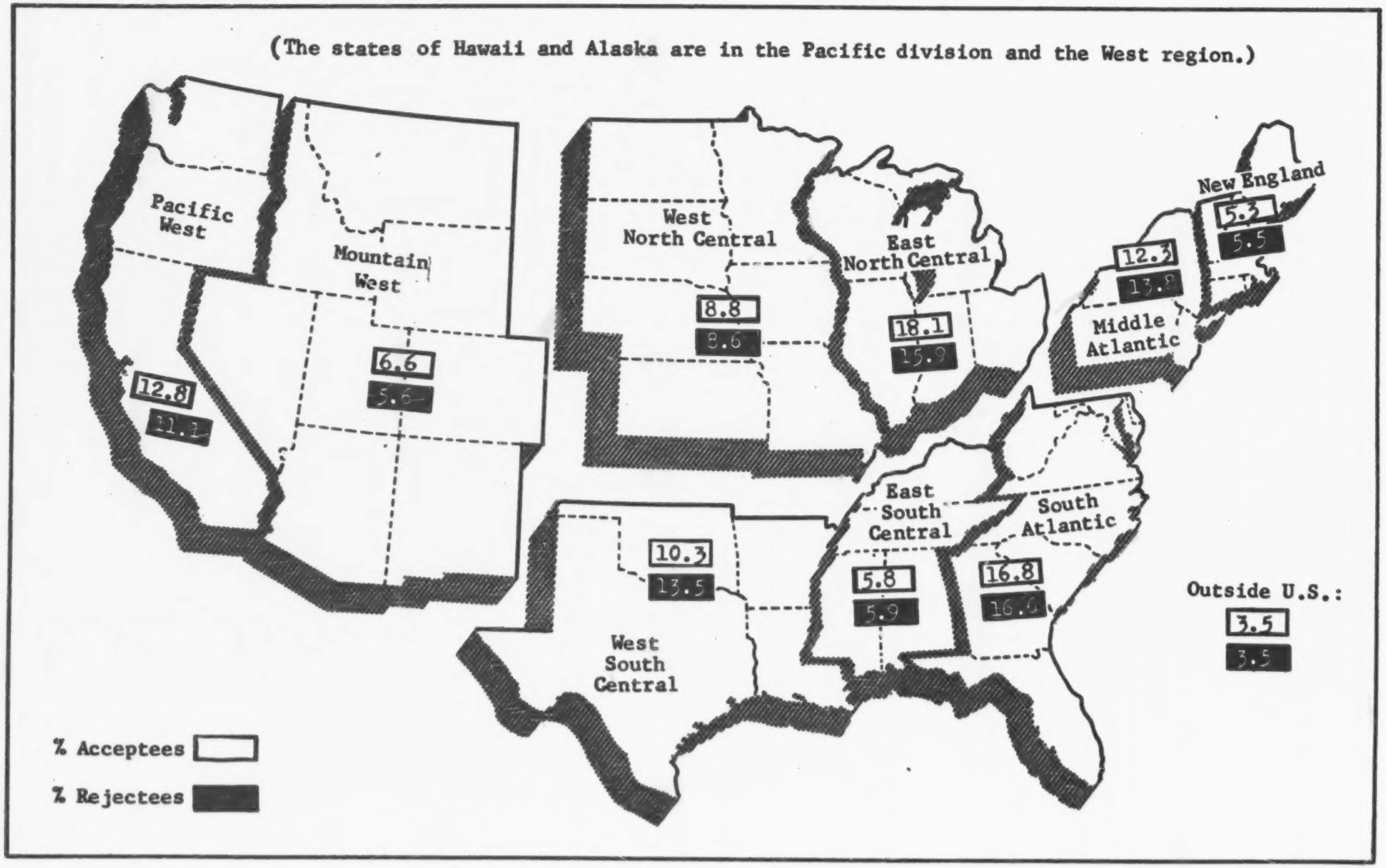

(The states of Hawaii and Alaska are in the Pacific division and the West region.)
Pacific West
12.8
11.1
Mountain West
6.6
5.6
West North Central
8.8
8.6
East North Central
18.1
15.9
Middle Atlantic
12.3
13.8
New England
5.3
5.5
West South Central
10.3
13.5
East South Central
5.8
5.9
South Atlantic
16.8
16.6
Outside U.S.:
3.5
3.5
% Acceptees
% Rejectees

Figure 3

Graduate grades (Tables 25 and A-34 to A-40). For both groups, mean graduate grade-point averages ranged from B- to B+. Acceptees had higher averages than rejectees in all subjects, but the differences were not statistically significant.

Major subject for bachelor's degree (Table A-47). In both groups, the most common major for the bachelor's degree was science, mathematics, or education, in that order. A significantly higher percentage of acceptees than of rejectees had majored in science or mathematics, and a significantly lower percentage had majored in education and a non-science, non-mathematics field.

Major subject for master's degree (Table A-48). Only 30.5% of the acceptees and 29.2% of the rejectees had master's degrees. Most of those who did majored in education for the master's. The groups were not significantly different with respect to majors.

Highest degree earned (Table A-50). Two applicants, rejectees, had the doctorate. The bachelor's was the highest earned for 67.4% of the acceptees and 71.5% of the rejectees. Most of the remaining applicants had master's degrees.

Recency of degree (Tables 26, A-51 and A-52). The acceptees had held their bachelor's and master's degrees longer than had the rejectees. In the case of the bachelor's (A's - 10.4 years; R's - 9.3 years) the difference was significant.

Employment Background

Number of years of experience teaching specific subjects (Tables 27, and A-61 to A-67). For just those in each group who did have experience teaching in a particular field, the greatest amount of experience was seen for the category "other" (A's - 8.8 years; R's - 6.8 years), which could include teaching army, civil defense, or adult education courses. The next greatest amount of teaching experience was seen for mathematics (A's - 5.8 years; R's - 6.2 years). Least teaching experience for acceptees was in earth science (3.8 years) and for rejectees was in physics (4.1 years). Teaching experience in physics was to an applicant's advantage.

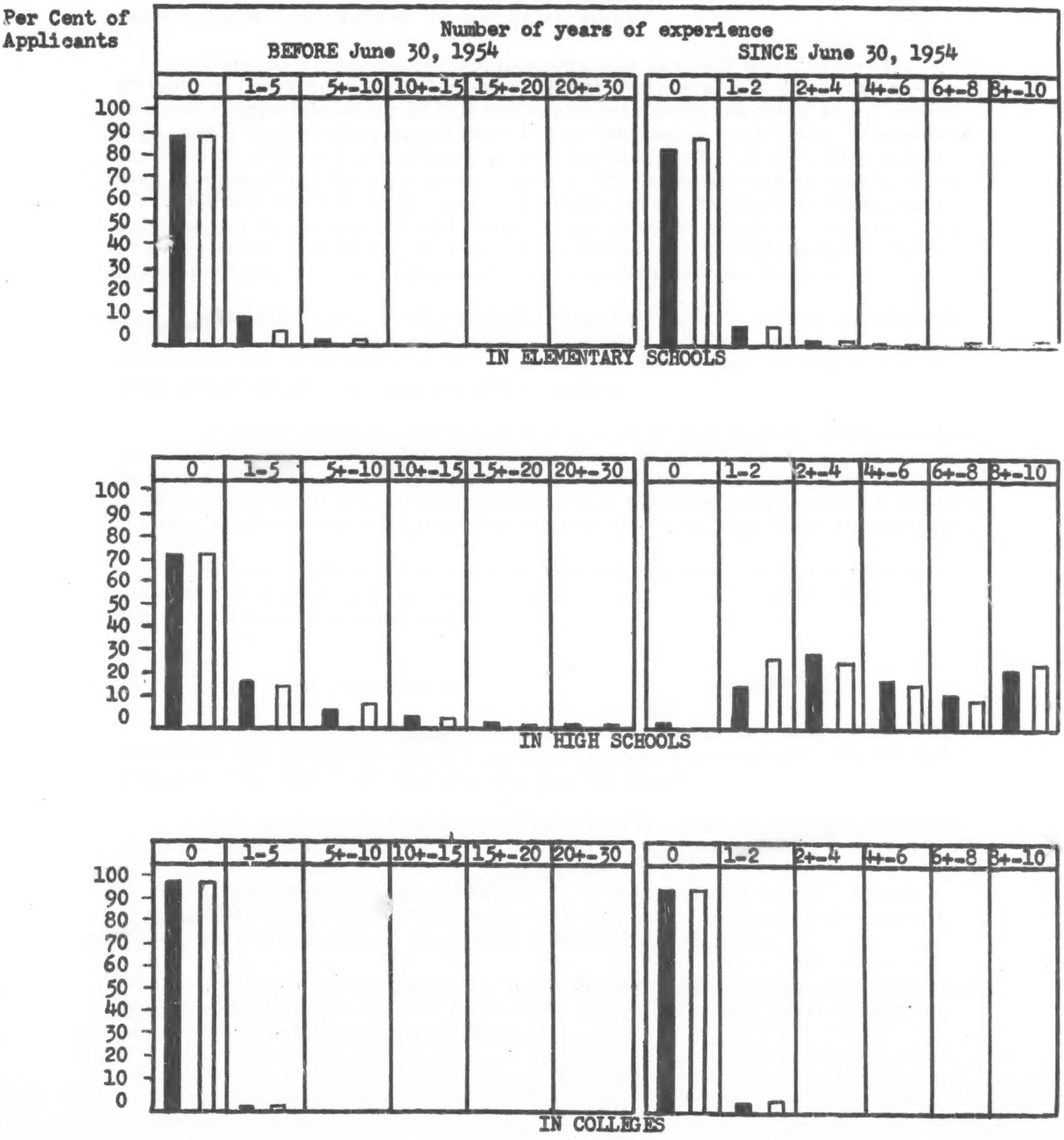
Professional experience during past five years (Table A-68). Approximately two-thirds of both the accepted and rejected groups had been involved in teaching only science and/or mathematics in high schools. Apparently applicants who had been teaching a non-science as well as science or mathematics had a slight advantage.

Teacher certification (Tables A-69 and A-70). Permanent secondary credentials were held by 86% of the acceptees and by 78% of the rejectees. The applicants who had provisional certification were at a disadvantage with regard to selection.

Certification deficiencies were reported by 19.7% of the acceptees and by 23.4% of the rejectees, and were usually in science or mathematics.

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

Sample: Secondary Unitary Low



% Acceptees ■
% Rejectees □

Figure 4

Present position (Table A-71). The category, "teacher", accounted for more than 90% of each group. Approximately 4% were classified as department heads, and the rest of the sample were either principal-teachers, counselors, or administrators.

Type of school where applicant taught (Tables A-72 to A-74). Private schools contributed 7.4% of the acceptees and 6.6% of the rejectees. Approximately 1/3 of the applicants were teaching at the junior high level, and slightly more than 1/3 at the senior high level. Combined junior high-senior high schools were represented by 17.8% of the acceptees and 14.8% of the rejectees. Only 7.8% of the acceptees and 5.1% of the rejectees had been teaching in a kindergarten-through-twelfth grade school, but those who did had better chances of acceptance than teachers at other types of school. In fact, teachers at senior high schools had a lower probability of acceptance to these institutes than did others.

The applicants in this sample taught in schools whose enrollment ranged from under 50 to over 5000. The most typical size of school represented had an enrollment of between 500 and 999. Size of school did not distinguish between acceptees and rejectees.

Present teaching emphasis (Tables A-75 and A-76). Mathematics, general science, and biology were observed to be the most typical subjects to dominate the teacher's weekly course schedule. Social science and physics were least frequently seen as chief teaching emphases. A schedule that emphasized biology or chemistry was to an applicant's advantage.

Where there were more than one subject in a teacher's schedule, general science or non-science, in that order, were most often seen as the second teaching emphasis.

Previous Institute Attendance*

NSF Summer Institutes (Table A-77). Approximately 73% of the acceptees had never attended a summer institute previously, 19.4% had attended one, and 7.9% had attended two or more.

NSF In-Service Institutes (Table A-79). One in-service institute had been attended by 12.8% of the acceptees, and two or more by 4.9%.

Other NSF programs (Tables A-78 and A-80 to A-82). One per cent or less of the acceptees had been involved in an Academic Year, a Research Participation, or an NSF Fellowship program.

Previous participation in some kind of NSF program was noted for 38.5% of the acceptees, and more than 1/3 of these had participated in two or more institutes or sessions.

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*Only acceptees were studied for these items.

Host Universities Attended for NSF Programs

Number of universities attended (Tables A-84 to A-90). The larger proportion of those who had attended summer institutes did so at one university and there was no instance in any of the other NSF programs where more than one university was attended. Taking all the programs together, however, 9.8% of the acceptees had attended two or more universities.

Consecutive attendance at the same university for two or more NSF institutes or activities was reported by 6.9% of the acceptees.

Professional Interests

Professional journals read regularly (Table A-91). The most frequent responses to this question came under the heading of "Education and General Science". Fourteen per cent of the acceptees and 20.1% of the rejectees were reading general science and/or special science journals (no education materials); and 28.4% of the acceptees and 29.6% of the rejectees were reading education or science-education journals.

Membership in professional organizations (Tables A-92 and A-93). The greater part of both the accepted and rejected groups were affiliated either with education organizations only, or with a combination of education and science-education organizations. Membership in a combination of education and science-education organizations seemed to be somewhat related to acceptance.

About 1/4 of each group belonged to regional organizations only, and more than half of each group belonged to both regional and national organizations. This factor was not apparent in selection at these institutes.

SECONDARY UNITARY LOW - SUMMARY OF SIGNIFICANT DIFFERENCES BETWEEN THE ACCEPTEES AND REJECTEES

Location of schools where the applicants taught may have influenced selection in some cases. It was more advantageous to have been teaching in a large city than in a community whose population was under 1/4 million; and applicants from the West North Central region had fewer chances of acceptance than those from other regions.

Educational factors, particularly at the undergraduate level, had some relationship to selection. The greater the number of undergraduate credits in the sciences, and the better the performance in undergraduate grades in biology or in education, the greater was the probability for acceptance. A science or mathematics major for the bachelor's seemed to be more acceptable than an education or non-science major.

With respect to employment background, it was observed that a permanent teaching credential for secondary schools; teaching in a kindergarten-through-twelfth grade school; having had teaching experience in physics; and having a weekly course schedule that emphasized biology or chemistry, were likely to increase the probability of acceptance.

Professional interests did not distinguish between acceptees and rejectees to a great extent. Membership in organizations that included some that were oriented toward science-education was in an applicant's favor.

Chapter 5

THE UNITARY SUMMER INSTITUTES FOR SECONDARY SCHOOL TEACHERS

II. Medium Preparation Level

Institutes offering courses that required a moderate amount of preparation in the specified fields comprised 29% of the 291 unitary institutes. The courses offered at this level that accounted for the greater proportion of participants were mathematics (35%), multiple fields (20%), and biology (15%). (See Table A-1.)

The Secondary Unitary Medium sample was composed of 525 acceptees and 525 rejectees. There were 406 males and 119 females in the accepted group and 425 males and 100 females in the rejected group.

GENERAL CHARACTERISTICS

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Age	35.1 years		33.8 years	
Marital status	Married	(74.3%)	Married	(71.8%)
No. of dependents	2.0^{+}	2.9^{++}	1.9^{+}	2.8^{++}
No. of dependent's allowances	1.9^{+}	2.8^{++}	1.8^{+}	2.6^{++}
Most undergraduate credits	Education	(19.5 hours)	Education	(20.2 hours)
Most graduate credits	Education	(10.2 hours)	Education	(7.6 hours)
Highest grades				
undergraduate:	Education	(3.0)	Education	(2.9)
graduate:	Education	(3.2)	Education	(3.1)

$^{+}$Total-group mean

$^{++}$Mean for those with non-zero responses

General Characteristics (continued)

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Highest degree	Bachelor's Master's	(61.3%) (38.5%)	Bachelor's Master's	(67.8%) (30.9%)
Most frequent major				
Bachelor's:	Science or math	(51.3%)	Science or math	(46.1%)
Master's:	Education	(53.7%	Education	(48.5%)
(Per cents are of number having the degree)				
Recency of Bachelor's	10.58 years		9.36 years	
Recency of Master's	7.95 years		8.49 years	
Chief teaching emphasis	Mathematics Biology General science	42.9% 22.9% 8.6%	Mathematics Biology General science	45.9% 14.5% 12.8%
Professional experience past 5 years	High school science or math	(84.2%)	High school science or math	(72.4%)
Years of teaching experience in secondary schools	3.73		3.23	
Total enrollment of school where applicant taught	1000-2499	(38.7%)	1000-2499	(33.0%)
Mean number of institutes attended				
NSF Summer:	0.6[+]	1.5[++]	--	
Total NSF:	0.9[+]	1.8[++]	--	
Professional journals	Educ. and/or sci.-educ.	(33.5%)	Educ. and/or sci.-educ.	(31.7%)
Professional affiliations				
Type:	Educ. and/or sci.-educ.	(72.9%)	Educ. and/or sci.-educ.	(74.9%)
Geographic extent:	National and regional	(68.4%)	National and regional	(59.6%)

[+] Total-group mean

[++] Mean for those with non-zero responses

5

General Characteristics (continued)

Variable	Modal or Mean Responses Acceptees		Rejectees	
Certification status	Permanent secondary	(85.3%)	Permanent secondary	(77.9%)
Certification deficiency	Secondary sci. or math	(4.8%)	Secondary sci. or math	(9.1%)

DESCRIPTION AND ANALYSIS OF THE DATA

Personal Variables

The only personal attribute that distinguished between acceptees and rejectees was age (Tables 19 and A-3). The mean ages for the acceptees and rejectees were 35.1 years and 33.8 years, respectively.

Location of Schools Where Applicants Taught

City (Table A-8). According to the 1960 census, communities with populations of less than 250,000 accounted for 78.6% of the U. S. population. These communities contributed 84.8% of the acceptees and 84.2% of the rejectees in the medium level unitary institutes sample. Cities with populations between 1/4 million and 1/2 million, which made up 5.9% of the U. S. population in 1960, contributed 6% of the acceptees and 4.8% of the rejectees. Cities with populations of 1/2 million or more, which made up 15.5% of the U. S. population, accounted for 9.8% of the acceptees and 11.6% of the rejectees.

State (Tables 21 and A-9). The distribution of participants from each state was quite similar to the distribution of U. S. secondary school science and mathematics teachers. There were more rejectees (in ratio to the total number of applicants) from Texas than would be expected by chance, but the per cent of acceptees (6.9%) is practically equivalent to the per cent of U. S. science and mathematics teachers in that state (6.84%).

Region (Tables 21 and A-10). The region with the most applicants to the medium-level unitary institutes was East North Central (A's - 19.6%; R's - 18.3%). The West South Central region contributed more rejectees than might be expected by chance, but generally, the distributions of acceptees and rejectees in each region were similar.

The proportion of the participant group in each region did not deviate markedly from the proportion of U. S. science and mathematics teachers in each region (see below).

	Estimated Percentage of Total U. S. Junior and Senior High School Science and Mathematics Teachers	Per Cent of Secondary Unitary Medium Institutes' Acceptees	Per Cent of Secondary Unitary Medium Institutes' Rejectees
New England	6.5	5.1	5.3
Middle Atlantic	16.0	16.2	15.8
East North Central	18.0	19.6	18.3
West North Central	10.1	10.3	9.7
South Atlantic	15.3	14.3	13.0
East South Central	7.5	5.7	6.3
West South Central	12.2	11.6	16.8
Mountain West	4.6	5.1	4.8
Pacific West	9.6	10.1	8.8
Outside U. S.		1.9	1.3

Educational Background

Undergraduate semester hours or credits[+] (Tables 22 and A-11 to A-18). The highest average number of credits was in education, with 19.5 hours for acceptees, and 20.2 hours for rejectees. Mathematics and biology were the next most popular undergraduate subjects for this sample, and earth science was least popular. It was observed that the more credits an applicant had in biology or in all the sciences together, the greater were his chances for selection.

Graduate semester hours or credits (Tables 23 and A-19 to A-26). A significantly larger proportion of the accepted group (60.6%) than of the rejected (45%) had some graduate credits in the sciences or mathematics, but graduate credits in education were more typical than in the sciences or mathematics.

[+] Engineering courses will not be noted for the secondary groups.

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: SECONDARY UNITARY MEDIUM

(The states of Hawaii and Alaska are in the Pacific division and the West region.)

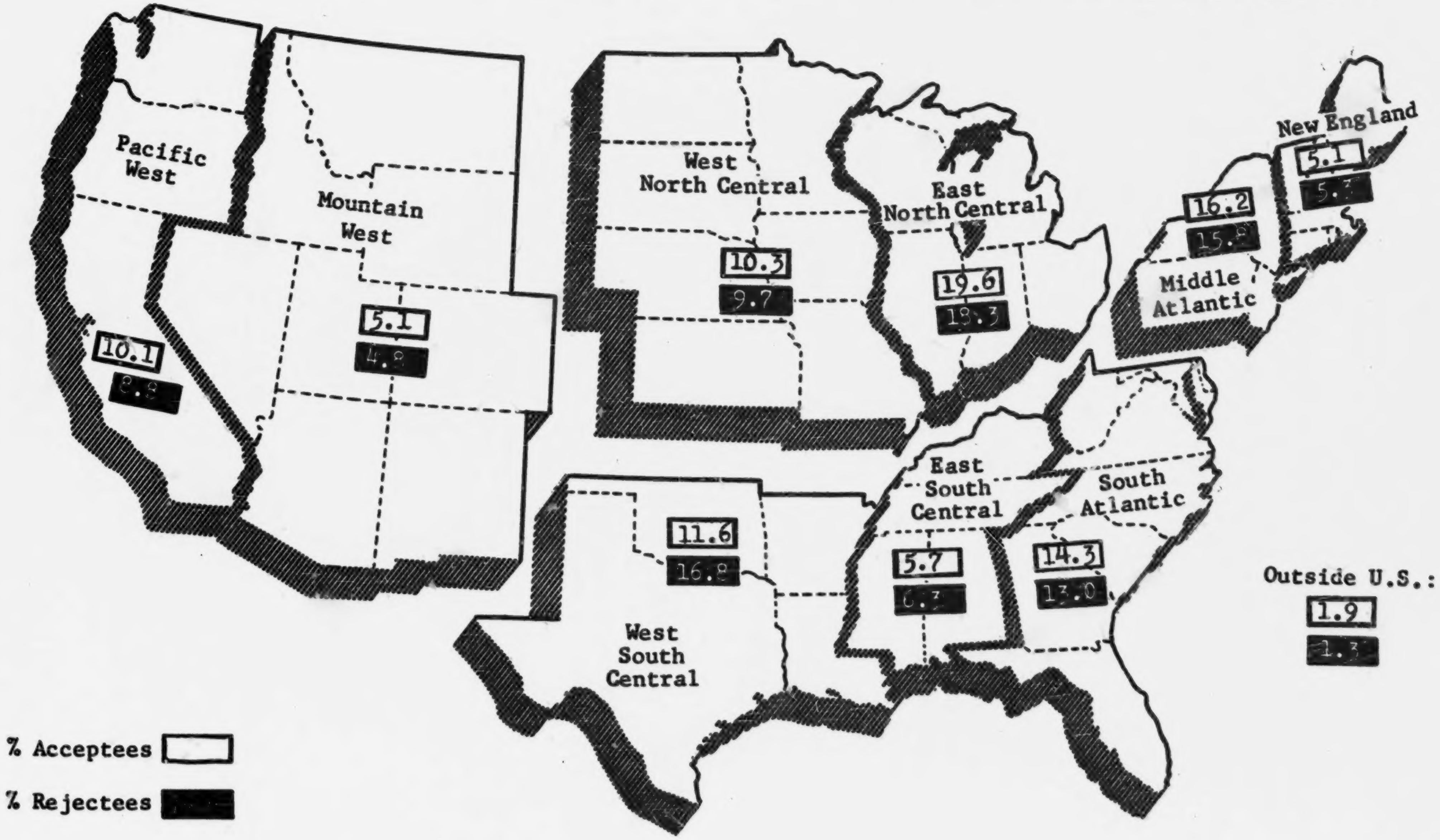
Pacific West
10.1
8.8
Mountain West
5.1
4.8
West North Central
10.3
9.7
East North Central
19.6
18.3
Middle Atlantic
16.2
15.8
New England
5.1
5.3
West South Central
11.6
16.8
East South Central
5.7
6.3
South Atlantic
14.3
13.0
Outside U.S.:
1.9
1.3
% Acceptees ☐
% Rejectees ■

Figure 5

Graduate credit in all sciences together, biology in particular, and in education, tended to increase the probability of acceptance.

Undergraduate grades (Tables 24 and A-27 to A-33). The mean undergraduate grade-point averages ranged from C+ to B. The highest grades were in education (A's - 3.00; R's - 2.92) and the lowest were in physics (A's - 2.36; R's - 2.29). Higher grades in biology, mathematics, and education were advantageous for selection.

Graduate grades (Tables 25 and A-34 to A-40). Mean graduate grade-point averages ranged from B- to B+. The accepted group had slightly higher grades than the rejected in most subjects, but this difference was a reliable one only for mathematics.

Major subject for Bachelor's degree (Table A-47). The most typical undergraduate major was science or mathematics for both acceptees and rejectees. An education major in a science or mathematics field was observed for 25.7% of the acceptees and 20.6% of the rejectees, and this type of major was in the applicant's favor. A straight education major appeared to work against the applicant.

Major subject for Master's degree (Table A-48). In the Secondary Unitary Medium sample, the master's was held by 38.3% of the acceptees and 31% of the rejectees. For these, the most typical graduate major was education. Major for the master's did not distinguish between acceptees and rejectees.

Highest degree earned (Table A-50). Approximately 61% of the acceptees and 68% of the rejectees had the bachelor's as the highest degree, and 38.5% of the acceptees and 31% of the rejectees had the master's as the highest degree. A master's degree was to an applicant's advantage for this group.

Recency of degrees (Table 26, A-51, and A-52). The accepted group had held their bachelor's degrees longer, on the average (10.5 years), than had the rejected group (9.4 years). On the other hand, those in the rejected group who had the master's had earned it earlier than did the accepted group, but the difference in time was not significant.

Employment Background

Number of years of experience teaching specific subjects (Tables 27 and A-61 to A-67). Looking at the data for just those with teaching experience in a specified field, the largest amount of experience, on the average, appeared to be in mathematics for both the acceptees (6.2 years) and rejectees (5.7 years). Teaching experience in chemistry and biology were next most typical. Amount of teaching experience in any subject failed to discriminate between acceptees and rejectees.

Professional experience during past five years (Table A-68). Teaching science and/or mathematics in high schools had been the predominant recent professional activity of both acceptees (84.2%) and

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

Sample: Secondary Unitary Medium

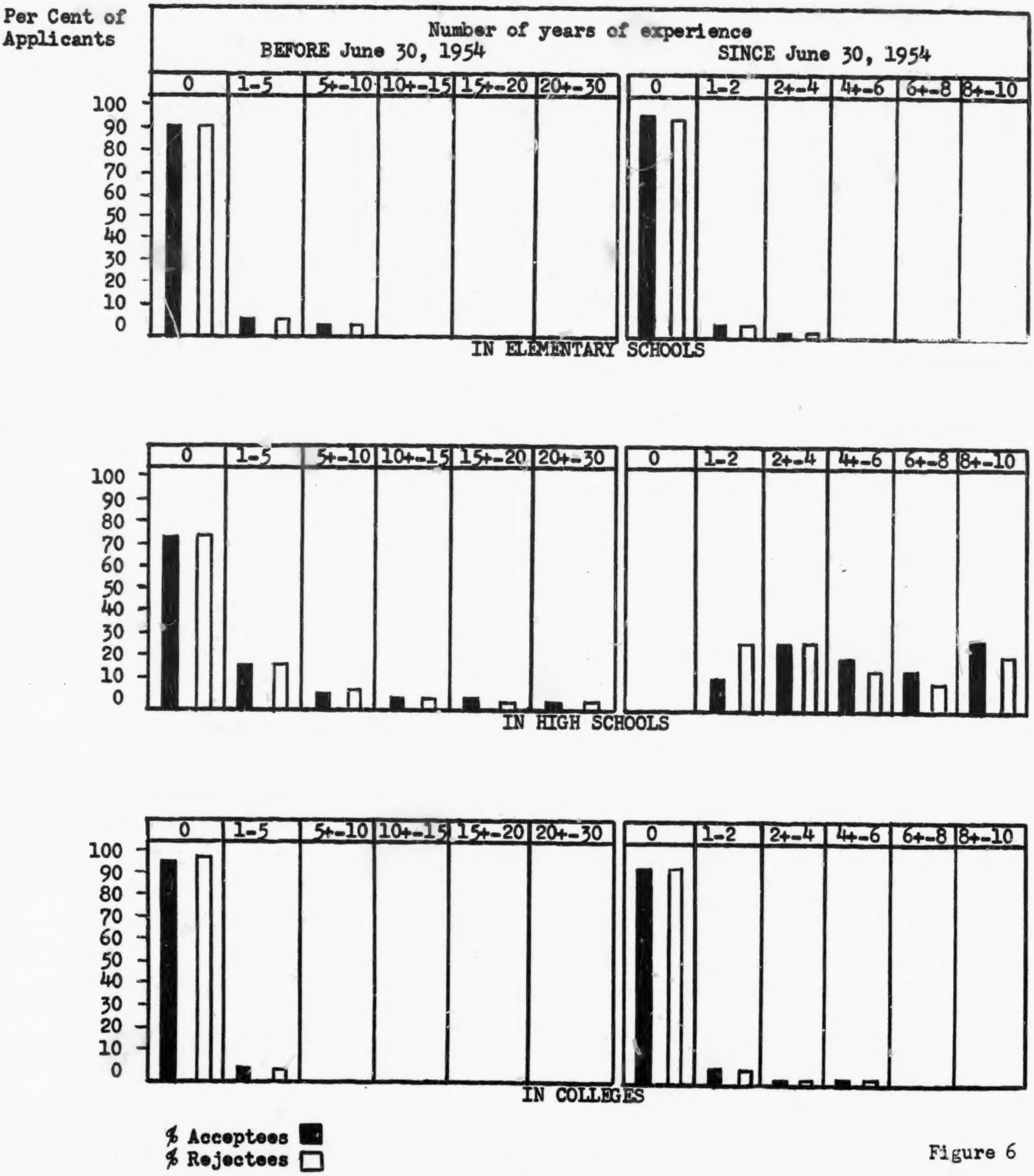

Figure 6

rejectees (72.4%). Such a professional background was distinctly in the applicant's favor, while a background that included the teaching of a non-science subject in addition to science or mathematics, was not.

Teacher certification (Tables A-69 and A-70). Permanent secondary credentials were held by 85.3% of the acceptees and by 77.9% of the rejectees. Selection appeared to favor full accreditation in preference to temporary or provisional accreditation.

The certification deficiencies reported by 9.5% of the acceptees and 18.7% of the rejectees were mainly in science or mathematics. A deficiency in these subjects tended to operate against the applicant.

Present position (Table A-71). The category, "teacher", accounted for 87.6% of the acceptees and 90.7% of the rejectees. The next largest category was "department head", which constituted 8.8% of the acceptees and 5.3% of the rejectees. The position of department head was to an applicant's advantage.

Type of school where applicant taught (Tables A-72 to A-74). Private schools contributed 7.6% of the acceptees and 9.5% of the rejectees. Junior high schools contributed 14.1% of the acceptees and 21.1% of the rejectees, and combined junior-senior high schools contributed 15.0% of the acceptees and 20.2% of the rejectees. Senior high schools, which accounted for the largest percentage of each group, appeared to be the more favored type of school in selection, in contrast to junior high schools or combined junior-senior high schools.

Present teaching emphasis (Tables A-75 and A-76). Mathematics, biology, and chemistry, in that order, were observed to be the most typical subjects to dominate the teacher's weekly course schedule. A teaching emphasis in biology was advantageous to the applicant, while one in general science was not.

Where there were more than one subject in a teacher's schedule, the second emphasis was usually in general science or chemistry for the acceptees and in general science or mathematics for the rejectees.

Previous Institute Attendance[+]

NSF Summer Institutes (Table A-77). Forty-one per cent of the acceptees had never attended a summer institute before, 24.8% had attended one, and 16.3% had attended two or more.

NSF In-Service Institutes (Table A-79). Almost 19% of the acceptees had previously attended one or more in-service institutes.

Other NSF programs (Tables A-78 and A-80 to A-82). Previous participation in Academic Year, Research Participation, or NSF Fellowship programs accounted for less than 2% of the acceptees in each case.

[+] Only acceptees were studied for these items.

About 1/2 of the accepted group had attended some kind of NSF program. Of those who did, 53% had participated in two or more. None reported attendance at a non-NSF institute (Table A-83).

Host Universities Attended for NSF Programs.

Number of universities attended (Tables A-84 to A-90). The larger proportion of those who had attended summer institutes did so at one university. Participation at two or more universities for summer institutes accounted for 12.2% of the acceptees.

In-service institutes at more than one university were observed for 1.5% of the acceptees, but only one university per applicant was involved for previous participation in the Academic Year, Research Participation, or NSF Fellowship programs. Taking all the programs together, attendance at more than one university was seen for 19.5% of the group.

Consecutive attendance at the same university for two or more NSF institutes or activities was reported by 10.9% of the acceptees.

Professional Interests

Professional journals read regularly (Table A-91). The most frequently reported journals were of the science-education and/or the general science types.

Membership in professional organizations (Tables A-92 and A-93). Membership in education organizations and/or science-education organizations was the most typical category for this item, accounting for 72.9% of the acceptees and 74.9% of the rejectees. Membership in education organizations only seemed to work against the applicant, while a combination of education and science-education memberships was in his favor.

Approximately 68% of the acceptees and 60% of the rejectees belonged to both national and regional organizations. Such widespread affiliations seemed to increase the probability of acceptance, while "regional memberships only" appeared to decrease it.

SECONDARY UNITARY MEDIUM SUMMARY OF DIFFERENCES BETWEEN ACCEPTEES AND REJECTEES

Acceptees as a group tended to be older than rejectees; to have more undergraduate and graduate credits in all the sciences together and in biology in particular; to have higher average undergraduate grades in biology, mathematics, and education, and higher graduate grades in mathematics; to have more science or mathematics majors for the bachelor's degree; to have more master's degrees as the highest degree earned; and to have held their bachelor's degrees longer.

Acceptees differed significantly from rejectees also in that more in their group than in the rejected group had been teaching a science or mathematics recently; had permanent secondary credentials; had no certification deficiency in science or mathematics; were teaching in senior high schools only; and had biology as their current chief teaching emphasis.

Acceptees tended more than rejectees to read journals that had some science content, and more acceptees than rejectees belonged to both national and regional organizations.

Although the accepted and rejected groups had many more similarities than differences, it may be observed that selection was somewhat biased in favor of the science and mathematics-oriented individual with an advanced degree and good scholarship.

Chapter 6

THE UNITARY SUMMER INSTITUTES FOR SECONDARY SCHOOL TEACHERS

III. High Level

Approximately 6.5% of the unitary institutes were designed for participants with considerable preparation in the specified fields. Institutes in biology, mathematics, and multiple fields drew the largest attendance at this level.

The Secondary Unitary High sample was composed of 125 acceptees and 125 rejectees. The accepted group consisted of 103 males and 22 females, and the rejected group of 111 males and 14 females.

GENERAL CHARACTERISTICS

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Age	33.7 years		32.5 years	
Marital status	Married	(80.8%)	Married	(80.0%)
No. of dependents	1.9[+]	2.8[++]	2.1[+]	3.0[++]
No. of dependent's allowances	1.8[+]	2.7[++]	1.9[+]	2.9[++]
Most undergraduate credits	Education	(19.7 hours)	Education	(20.9 hours)
Most graduate credits	Education	(9.4 hours)	Education	(8.9 hours)
Highest grades				
undergraduate:	Education	(3.0)	Education	(2.9)
graduate:	Education	(3.2)	Education	(3.2)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Highest degree	Bachelor's	(52.0%)	Bachelor's	(62.4%)
	Master's	(48.0%)	Master's	(36.8%)
Most frequent major				
Bachelor's:	Science or math	(71.6%)	Science or math	(54.9%)
Master's:	Education	(42.6%)	Education	(50.0%)
(Per cents are of number having the degree)				
Recency of degrees				
Bachelor's	9.6 years		8.5 years	
Master's	6.3 years		7.3 years	
Chief teaching emphasis	Biology	(40.8%)	Mathematics	(37.6%)
	Mathematics	(33.6%)	Biology	(29.6%)
	Chemistry	(16.0%)	General science	(12.8%)
Professional experience past 5 years	Teach secondary sci. or math	(91.2%)	Teach secondary sci. or math	(76.0%)
Teaching experience in secondary schools	3.3 years		2.9 years	
Total enrollment of school where applicant taught	1000-2499	(56.0%)	1000-2499	(34.4%)
Mean number of institutes attended:				
NSF Summer:	0.8[+]	1.6[++]	--	
Total NSF:	1.2[+]	1.8[++]	--	
Professional journals	Sci.-educ. and/or general sci.	(24.8%)	Education and/or sci.-educ.	(30.4%)
Professional affiliations				
Type:	Educ. and/or sci.-educ.	(68.0%)	Education and/or sci.-educ.	(80.0%)
Geographic extent:	National and regional	(73.6%)	National and regional	(66.4%)

[+] Total-group mean

[++] Mean for those with non-zero responses

General Characteristics (continued)

Variable	Modal or Mean Responses Acceptees		Rejectees	
Certification status	Permanent secondary	(85.6%)	Permanent secondary	(81.6%)
Certification deficiency	Sci. or math and Educ.	(4.8%)	Sci. or math	(4.8%)

DESCRIPTION AND ANALYSIS OF THE DATA

Location of Schools Where Applicants Taught

City (Table A-8). According to the 1960 census, communities with populations of less than 250,000 accounted for 78.6% of the U. S. population. In the Secondary Unitary High sample, 90.4% of the acceptees and 82.4% of the rejectees came from such communities. Cities with populations between 1/4 million and 1/2 million, which made up 5.9% of the U. S. population in 1960, contributed 2.4% of the acceptees and 12.0% of the rejectees. Cities with populations of 1/2 million or more, which made up 15.5% of the U. S. population, contributed 7.2% of the acceptees and 5.6% of the rejectees.

State (Tables 21 and A-9). The sample sizes of acceptees and rejectees, when distributed over the states, were too small to make reliable comparisons.

Region (Tables 21 and A-10). The region with the most applicants was East North Central (A's - 28.8%; R's - 22.4%). The East North Central and Pacific West regions (A's - 3.2%; R's - 7.2%) were the only ones to show more than a minimal disparity in the sizes of the acceptee and rejectee groups, and these differences were not statistically significant.

Compared to the distribution of U. S. secondary school science and mathematics teachers (see chart below), the percentages of participants to the high level unitary institutes were greater in the Middle Atlantic and East North Central regions, and smaller in the East and West South Central and Pacific West regions.

Region	Estimated Percentage of Total U. S. Junior and Senior High School Science and Mathematics Teachers	Per Cent of Secondary Unitary High Institutes' Acceptees	Per Cent of Secondary Unitary High Institutes' Rejectees
New England	6.48	4.0	4.8
Middle Atlantic	16.04	20.8	17.6
East North Central	18.00	28.8	22.4
West North Central	10.14	12.0	11.2
South Atlantic	15.34	16.0	16.0
East South Central	7.50	3.2	3.2
West South Central	12.21	5.6	8.8
Mountain West	4.63	5.6	8.8
Pacific West	9.64	3.2	7.2

Educational Background

Undergraduate semester hours or credits[+] (Tables 22 and A-11 to A-18). The highest average number of credits in a single subject was in education, with 19.7 hours for acceptees and 20.1 hours for rejectees. Biology was the next most popular undergraduate course, with 18.3 hours for acceptees and 17.2 hours for rejectees.

Acceptees had more credits, on the average, than did rejectees in every subject except mathematics and education. This edge was significantly high for chemistry, physics, and all sciences as a whole.

Graduate credits (Tables 23 and A-19 to A-26). The largest average number of graduate credits for both groups was in education.

Significantly more acceptees (82.4%) than rejectees (50.4%) had some graduate credit in the sciences and/or mathematics, and, as corollary to that, the acceptees as a group had more credits in every subject than did the rejectees. These differences were significant for biology, chemistry, and all sciences as a whole.

Undergraduate grades (Tables 24 and A-27 to A-33). The mean undergraduate grade-point averages ranged from C+ to B- for both acceptees and rejectees. The highest grades were observed for education and biology, and the lowest for physics and chemistry.

[+] Engineering courses will not be noted for the secondary groups.

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: SECONDARY UNITARY HIGH

(The states of Hawaii and Alaska are in the Pacific division and the West region.)

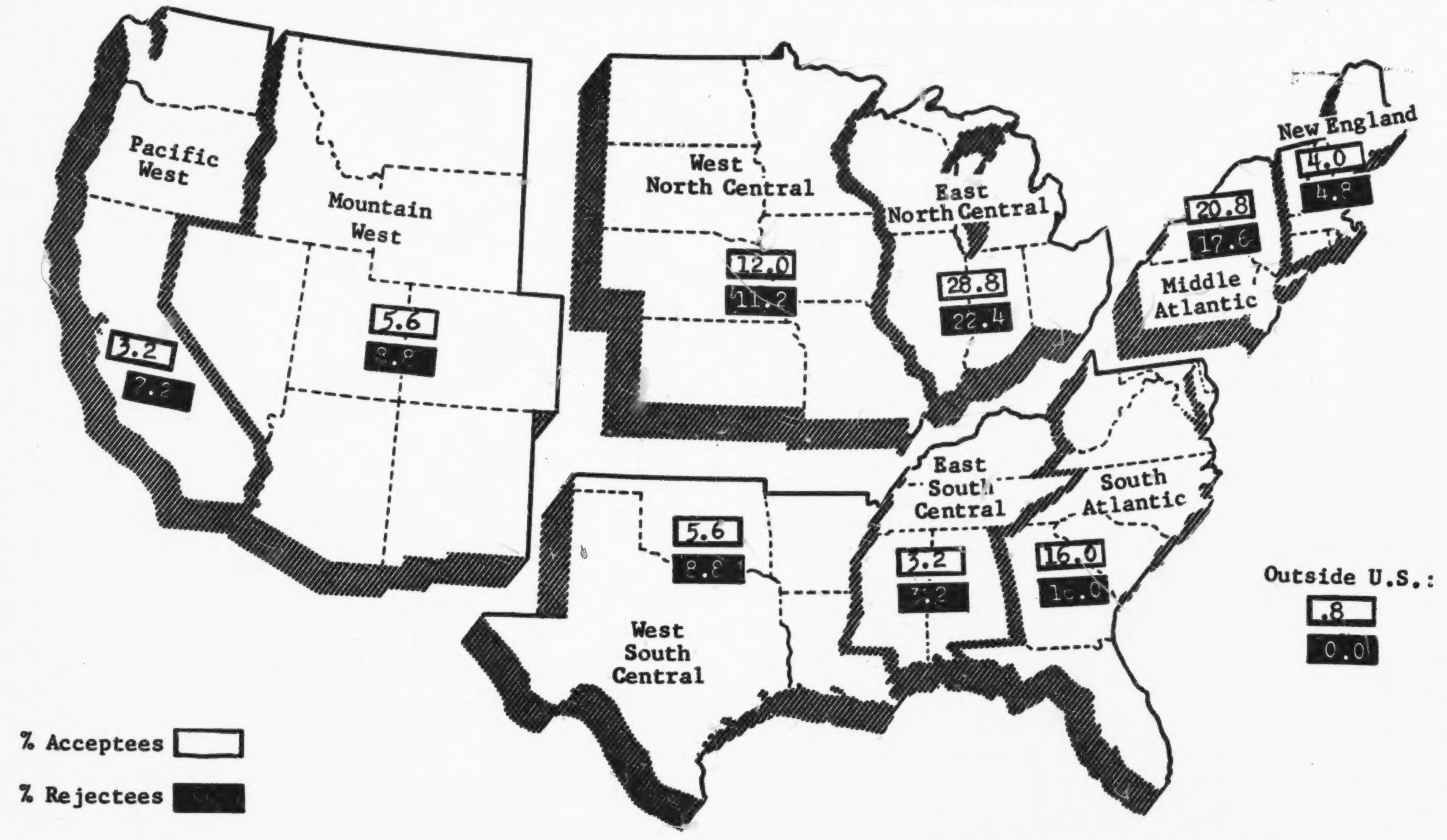
Pacific West
3.2
7.2
Mountain West
5.6
8.8
West North Central
12.0
11.2
East North Central
28.8
22.4
New England
4.0
4.8
Middle Atlantic
20.8
17.6
West South Central
5.6
8.8
East South Central
3.2
7.2
South Atlantic
16.0
16.0
Outside U.S.:
.8
0.0
% Acceptees
% Rejectees

Figure 7

The acceptees had slightly higher grades than the rejectees in every subject, but these differences were not statistically reliable.

Graduate grades (Tables 25 and A-34 to A-40). Mean graduate grade-point averages for the groups ranged from B- to B+. The highest grades were in biology and education for acceptees, and in education and mathematics for the rejectees. Graduate grades did not distinguish significantly between groups except in the case of biology (A's - 3.24; R's - 2.91).

Major subject for Bachelor's degree (Table A-47). The undergraduate major for both groups was most typically science or mathematics, or education in a science or mathematics field. It was distinctly in an applicant's favor to have majored strictly in a science or mathematics.

Major subject for Master's degree (Table A-48). The master's was held by 48.8% of the acceptees and by 38.4% of the rejectees of the high level unitary institutes. For these, the graduate major was most typically education. A science or mathematics major was significantly more frequent among the acceptees than among the rejectees.

Highest degree earned (Table A-50). The highest degree earned for both groups was more often the bachelor's than the master's. However, 48% of the acceptees and 37.6% of the rejectees did have advanced degrees. Significantly more acceptees (48.0%) than rejectees (36.8%) had the master's as the highest degree earned.

Recency of degrees (Tables 26, A-51, and A-52). The accepted group had held their bachelor's degrees longer, on the average (9.6 years) than did the rejected group (8.5 years), but the rejected group had held their master's degrees longer (A's - 6.3 years; R's - 7.3 years). Neither difference was statistically reliable.

Employment Background

Number of years of experience teaching specific subjects (Tables 27 and A-61 to A-67). The data for only those individuals who had teaching experience in a specified field indicate that the highest number of years of experience for both acceptees and rejectees was in mathematics (A's - 6.2 years; R's - 5.8 years). Teaching "other" subjects proved to be least. This variable did not discriminate between acceptees and rejectees.

Professional experience during past five years (Table A-68). Teaching only science and/or mathematics in secondary schools had been the predominant professional activity of both acceptees (91.2%) and rejectees (76.0%), and such activity was to an applicant's advantage. Approximately 15% of the rejectees had been teaching non-science subjects, either alone or in combination with science subjects.

Teacher certification (Tables A-69 and A-70). Permanent secondary credentials were held by 85.6% of the acceptees and by 81.6% of the rejectees. The certification deficiencies reported by 7.2% of the acceptees and by 14.4% of the rejectees were mainly in science or mathematics.

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

Sample: Secondary Unitary High

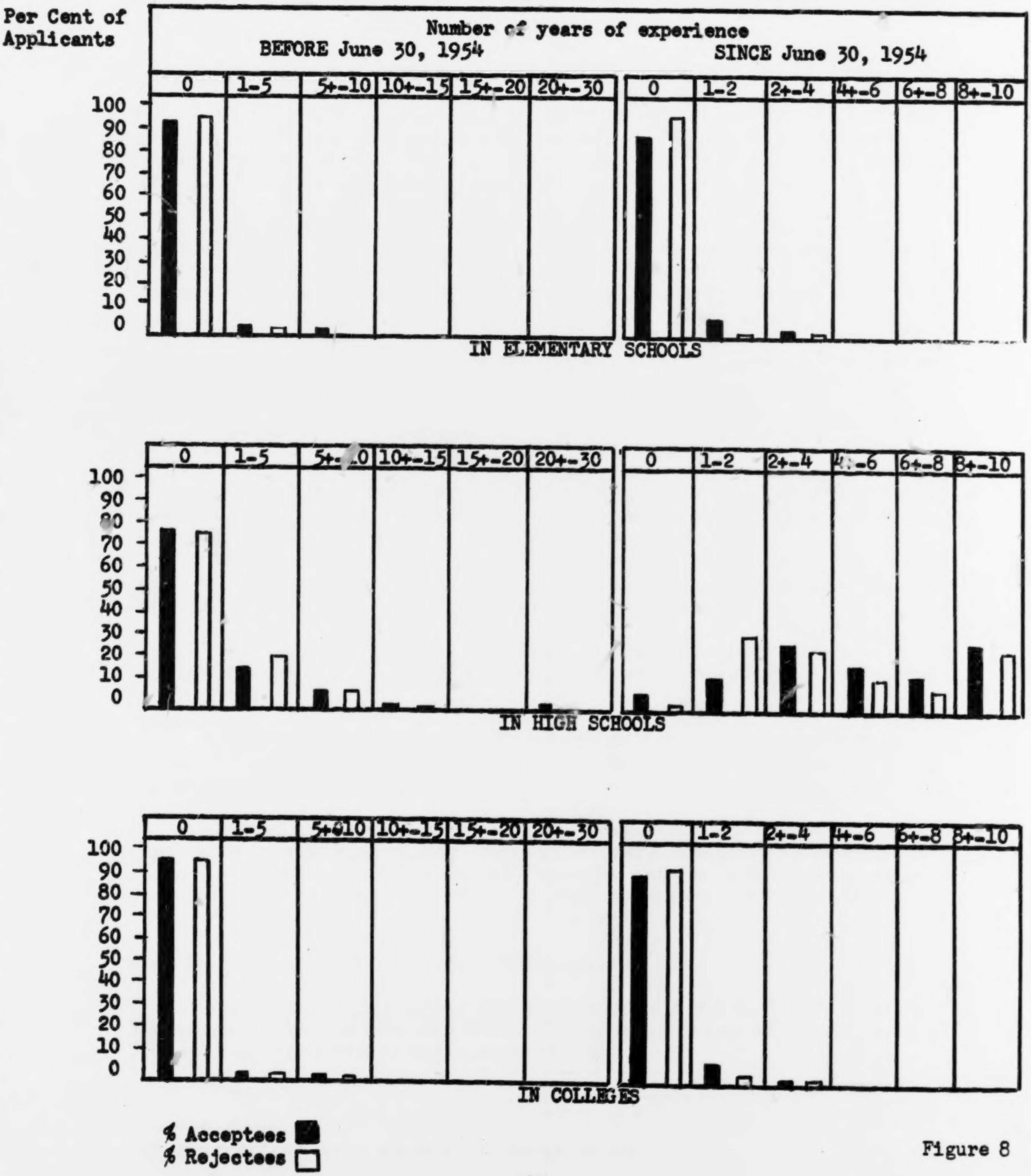

Figure 8

Present position (Table A-71). The category "teacher" accounted for 82.4% of the acceptees and 87.2% of the rejectees. Department heads formed the next largest category with 12% of the acceptees and 4% of the rejectees.

Type of school where applicant taught (Tables A-72 to A-74). Private schools contributed 7.2% of the acceptees and 5.6% of the rejectees in the high level unitary institutes sample. Junior high schools and combined junior-senior high schools accounted for 24% of the acceptees and 37.2% of the rejectees. The larger proportion of each group had been teaching at senior high schools only (A's - 72%; R's - 58.4%).

Present teaching emphasis (Tables A-75 and A-76). Biology, mathematics, and chemistry, in that order, were reported most often as chief teaching emphases by the acceptees; mathematics, biology, and general science were the most typical chief teaching emphases of the rejectees.

Where there were more than one subject in a teacher's schedule, the second emphasis was usually on general science for the acceptees and on general science or biology for the rejectees.

Previous Institute Attendance[+]

NSF Summer Institutes (Table A-77). Fifty per cent of the acceptees had never attended a summer institute previously, 31.2% had attended one, and 19.2% had studied at two or more.

NSF Academic Year Institutes (Table A-78). Approximately 5% of the sample had attended one academic year institute.

NSF In-Service Institutes (Table A-79). In-service institutes had been attended by 28.8% of the sample. Of these, about 1/4 had attended two or more.

Other NSF programs (Tables A-80 to A-82). Two individuals reported two research participations each, and one individual reported a one-year NSF Fellowship.

Taking all the NSF programs together, 65.6% of the acceptees had experienced some kind of NSF study previously. Slightly more than half of these had participated in one NSF activity and the balance were at two or more. Very few had attended non-NSF institutes (Table A-83).

Host Universities Attended for NSF Programs

Number of universities attended (Tables A-84 to A-90). Almost 3/4 of those who had attended summer institutes did so at one university. The rest attended two or more universities.

[+] Only acceptees were studied for these items.

Attendance at more than one university for other NSF programs was reported by three people for In-Service institutes and by one person for Research Participation. Attendance at more than one university for any NSF program was observed for 24% of the group.

Consecutive attendance at the same university for two or more NSF institutes or activities was reported by 12.8% of the group.

Professional Interests

Professional journals read regularly (Table A-91). The most frequently reported journals by the acceptees were of the science-education and general science types, and by the rejectees, were the education and science education types.

Membership in professional organizations (Tables A-92 and A-93). Membership in general science or science-education organizations was the most typical category, accounting for 68% of the acceptees and 80% of the rejectees. To have been affiliated with organizations whose orientation was strictly educational rather than scientific worked against the applicant.

Approximately 3/4 of the acceptees and 2/3 of the rejectees belonged to both regional and national organizations. The next largest category was "regional organizations only", which were reported by 20% of the acceptees and 23.2% of the rejectees.

SECONDARY UNITARY HIGH - SUMMARY OF DIFFERENCES BETWEEN ACCEPTEES AND REJECTEES

Due to the fact that small categories usually resulted from the distribution of 125 acceptees and 125 rejectees over a number of possible responses to each item, few of the observed differences reached statistical significance. Those differences considered strongly reliable are noted below.

The acceptees, as a group, had more undergraduate credits than the rejectees in chemistry, physics, and all sciences as a whole, and had more graduate credits in biology, chemistry, and all sciences as a whole. The acceptees had significantly higher graduate grades in biology. More among them than among the rejectees had the master's degree and had majored in a science or mathematics for both the bachelor's and master's degrees. A recent professional background of teaching only a science or mathematics in secondary schools; of being a department head; or of teaching only at senior high schools, was more frequent in the accepted than in the rejected group. More acceptees than rejectees had professional affiliations that included some scientific, rather than purely educational orientation.

Academic preparation in the sciences and professional experience teaching the sciences or mathematics seem to have emerged as the strongest general factors controlling selection at the high level summer institutes.

Chapter 7

THE SEQUENTIAL INSTITUTES FOR SECONDARY SCHOOL TEACHERS

I. Low Preparation Level

Approximately 13% of the 148 sequential institutes in 1964 were designed for participants with little or no preparation in the specified fields. The courses offered at this level of institute that accounted for the greater proportion of its participants were multiple fields (47%), mathematics (21%), and general science (15%). (See Table A-1.)

The Secondary Sequential Low sample was composed of 150 acceptees and 150 rejectees. The distribution of male and female applicants was the same in both groups: 119 male, 31 female.

GENERAL CHARACTERISTICS

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Age	34.6 years		33.0 years	
Marital status	Married	(74.0%)	Married	(68.7%)
No. of dependents	2.4[+]	3.1[++]	2.1[+]	2.9[++]
No. of dependent's allowances	2.2[+]	2.9[++]	1.9[+]	2.6[++]
Most undergraduate credits	Education	(22.4 hours)	Education	(21.7 hours)
Most graduate credits	Education	(6.6 hours)	Education	(6.6 hours)
Highest grades undergraduate:	Education	(3.0)	Education	(2.9)
graduate:	Education	(3.2)	Education	(3.1)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Highest degree	Bachelor's Master's	(77.3%) (22.7%)	Bachelor's Master's	(74.0%) (24.7%)
Most frequent major				
Bachelor's:	Educ. or educ. in sci. or math	(49.4%)	Science or math	(57.4%)
Master's: (Per cents are of number having the degree)	Education	(76.5%)	Education	(64.9%)
Recency of degrees				
Bachelor's:	10.1 years		8.3 years	
Master's:	7.8 years		6.9 years	
Chief teaching emphasis	Mathematics General science Biology	(35.3%) (34.7%) (13.3%)	Mathematics General science Biology	(32.0%) (26.0%) (13.3%)
Professional experience past 5 years	Teach secondary sci. and/or math	(74.7%)	Teach secondary sci. and/or math	(78.7%)
Teaching experience in secondary schools	3.8 years		3.1 years	
Total enrollment of school where applicant taught	1000-2499	(28.7%)	500-999	(34.0%)
Mean number of institutes attended:				
NSF Summer	1.0[+]	1.7[++]	--	
Total NSF	1.3[+]	1.9[++]	--	
Professional journals	Sci.-educ. and/or general sci.	(29.4%)	Education and/or sci.-educ.	(27.3%)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

Variable	Modal or Mean Responses Acceptees		Rejectees	
Professional affiliations				
Type:	Education only	(41.3%)	Education only	(48.0%)
Geographic extent:	National and regional	(62.7%)	National and regional	(64.7%)

DESCRIPTION AND ANALYSIS OF THE DATA

Personal Variables

Number of dependents and dependent's allowances (Tables 20, A-6, and A-7). The average numbers of dependent's allowances requested by the acceptees and rejectees were 2.2 and 1.9, respectively. The acceptees' edge on number of allowance requests was statistically significant. However, those with no allowance needs had a significant advantage over those who requested four allowances.

Personal variables such as age (Tables 19 and A-3) and marital status (Table A-5) did not distinguish between acceptees and rejectees.

Location of Schools Where Applicants Taught

City (Table A-8). Approximately 89% of the acceptees and 88% of the rejectees taught in communities with populations of less than 250,000. According to the 1960 census, these communities accounted for 78.6% of the U. S. population. Cities with populations between 1/4 million and 1/2 million, which made up 5.9% of the U. S. population in 1960, yielded 4.7% of the acceptees and 2.8% of the rejectees to the low level sequential institutes. Cities with populations of 1/2 million or more, which made up 15.5% of the U. S. population, yielded 6.1% of the acceptees and 9.5% of the rejectees.

State (Tables 21 and A-9). The comparatively small number of applicants to the low level sequential institutes, when distributed over most of the states, made reliable tests of differences between groups unlikely. The more populous states accounted for the most applicants. There were higher ratios of acceptees to rejectees in Massachusetts, Mississippi, North Dakota, and Washington.

Region (Tables 21 and A-10). The region with the most applicants was East North Central (A's - 18%; R's - 24%). The percentages of acceptees and rejectees from each region were close, except in the case of West North Central, from which region there were significantly more acceptees than would be expected by chance.

The following chart compares the per cent of all U. S. secondary school science and mathematics teachers in each region with the per cents of acceptees and rejectees from each region.

	Estimated Percentage of Total U. S. Secondary School Teachers of Science and Mathematics	Per Cent of Secondary Sequential Low Institute's Acceptees	Per Cent of Secondary Sequential Low Institute's Rejectees
New England	6.48	10.0	5.3
Middle Atlantic	16.04	14.0	18.0
East North Central	18.00	18.0	24.0
West North Central	10.14	16.0	8.0
South Atlantic	15.34	10.0	15.3
East South Central	7.50	8.7	6.7
West South Central	12.21	4.7	8.0
Mountain West	4.63	6.7	5.3
Pacific West	9.64	12.0	9.3

It can be observed that more acceptees than might be expected were from the New England, West North Central, Mountain, and Pacific regions, and that fewer than might be expected were from the Middle Atlantic, South Atlantic, and West South Central regions.

Generally speaking, location of schools where applicants taught did not influence selection.

Educational Background

Undergraduate semester hours or credits[+] (Tables 22 and A-11 to A-18). Most of the applicants reported some course work in education, mathematics, biology, chemistry, and physics. The highest average

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[+] Engineering courses will not be noted for the secondary groups.

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: SECONDARY SEQUENTIAL LOW

(The states of Hawaii and Alaska are in the Pacific division and the West region.)

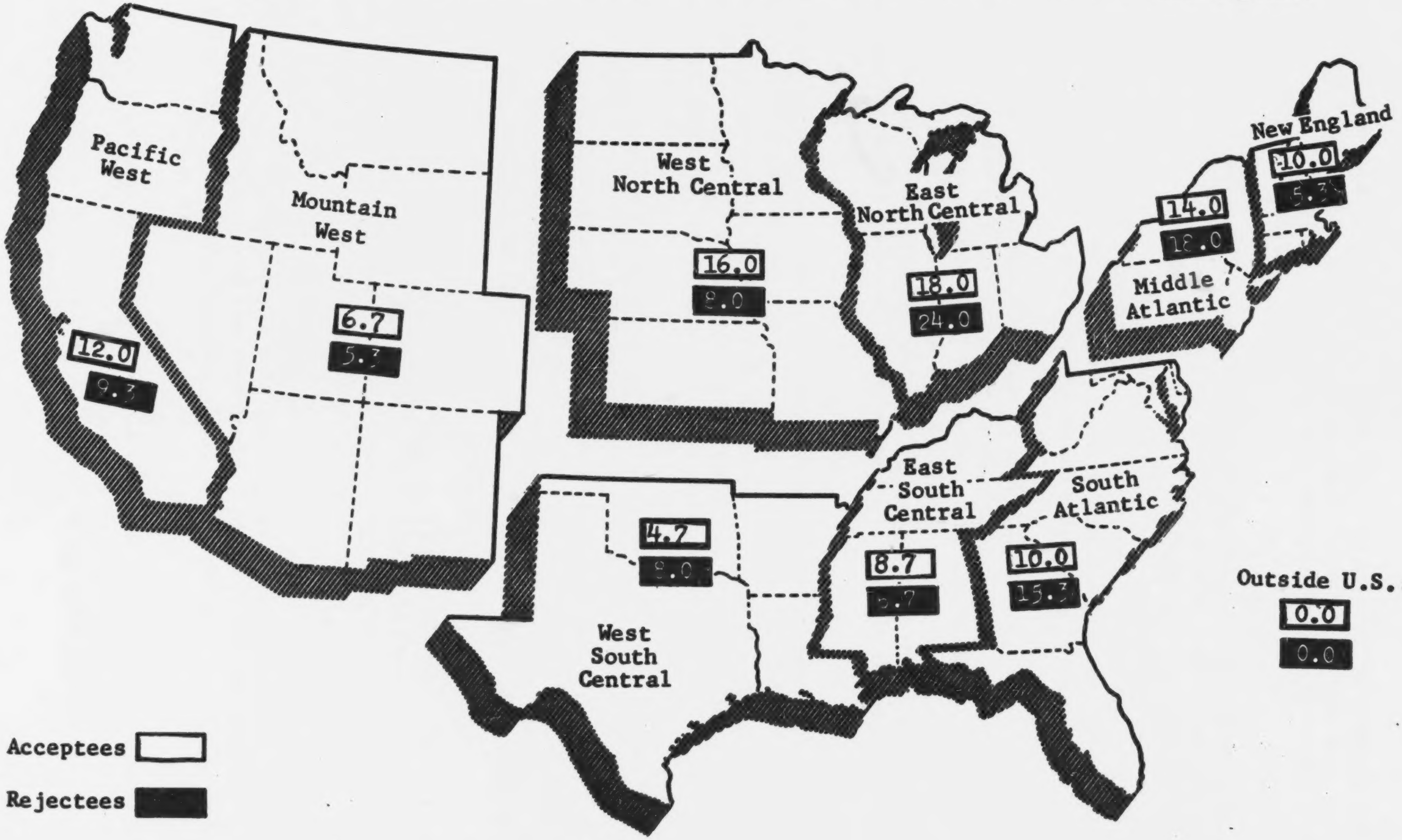

Pacific West
12.0
9.3
Mountain West
6.7
5.3
West North Central
16.0
8.0
East North Central
18.0
24.0
New England
10.0
5.3
14.0
18.0
Middle Atlantic
West South Central
4.7
8.0
East South Central
8.7
6.7
South Atlantic
10.0
15.3
Outside U.S.:
0.0
0.0
% Acceptees ☐
% Rejectees ■

Figure 9

number of credits was in education, with 22.4 hours for acceptees and 21.7 hours for rejectees. The fewest credits for both groups was in earth science. There was virtually no difference between acceptees and rejectees on total science credits.

Graduate credits (Tables 23 and A-19 to A-26). A significantly larger proportion of the acceptees (59.3%) than of the rejectees (39.3%) had some graduate credits in the sciences. The proportion who had graduate education credits were approximately equal: acceptees, 44%; rejectees, 42%. Education, mathematics, biology, and chemistry, in that order, accounted for the largest numbers of credits for both groups. Credits in earth science were somewhat advantageous for an applicant.

Undergraduate grades (Tables 24 and A-27 to A-33). The mean undergraduate grade-point averages ranged from C+ to B for both groups. The highest grades were seen for education (A's - 3.0; R's - 2.9) and the lowest for physics (A's - 2.3; R's - 2.2). Except for earth science, it was observed that the acceptees had the higher grades in all subjects. Grades in mathematics and education were significantly higher in the accepted group.

Graduate grades (Tables 25 and A-34 to A-40). Mean graduate grade-point averages for the groups ranged from B- to B+. The highest grades were in education (A's - 3.2; R's - 3.1). The accepted group had higher averages than the rejectees in all subjects. This difference was significant for physics, mathematics, and earth science.

Major subject for Bachelor's degree (Table A-47). Major for the bachelor's degree was most typically either education or science or mathematics for the acceptees and science or mathematics for the rejectees. A fair-sized percentage of each group, 14% of the acceptees and 16.7% of the rejectees, had majored in a non-science, non-education field. It was distinctly in the applicant's favor to have majored in education rather than in science or mathematics.

Major subject for the Master's degree (Table A-48). Only 22.7% of the acceptees and 24.7% of the rejectees had the master's. Of these, most of the majors were in education. Major for the master's did not distinguish between the acceptees and rejectees.

Highest degree earned (Table A-50). No applicants in the sample had the doctorate. The master's was the highest degree earned for 22.7% of the acceptees and 24.7% of the rejectees. Most of the acceptees and rejectees had the bachelor's degree. Only 2 individuals, rejectees, had no degree.

Recency of degrees (Tables 26, A-51 and A-52). The accepted group had held their bachelor's and master's degrees more years on the average than had the rejected group. This finding was statistically reliable in the case of the bachelor's degree.

Employment Background

Number of years of experience teaching specific subjects (Tables 27 and A-61 to A-67). The greatest number of years of experience teaching a subject was in mathematics for both acceptees (6.4 years) and rejectees (5.5 years). The least teaching experience was seen for earth science and physics (when "other subjects" are discounted). Type and amount of teaching experience did not distinguish between acceptees and rejectees.

Professional experience during past five years (Table A-68). Teaching only science and/or mathematics in secondary schools had been the predominant professional activity of both acceptees (74.7%) and rejectees (78.7%). Approximately 17% of the acceptees and 21% of the rejectees had been teaching a non-science in addition to science or mathematics.

Teacher certification (Tables A-69 and A-70). Permanent secondary credentials were held by 82% each of the acceptees and rejectees, and provisional or temporary secondary credentials by 15.3% of the acceptees and 12% of the rejectees.

The certification deficiencies reported by 25.3% of the acceptees and 18% of the rejectees were usually in science or mathematics. Few applicants reported deficiencies in education.

Present position (Table A-71). The category "teacher" accounted for the better part of both groups. "Department Heads" was a distant second, accounting for 4.7% each of the acceptees and rejectees.

Type of school where applicant taught (Tables A-72 to A-74). Private schools contributed 10.7% of the acceptees and 13.3% of the rejectees. Approximately 1/4 of the applicants were teaching at the junior high level, 1/5 at combined junior and senior high schools, and more than 1/3 at senior high schools. Those teaching at schools where all the grades from kindergarten to twelfth were represented had significantly better chances of being accepted than if they taught at any other type.

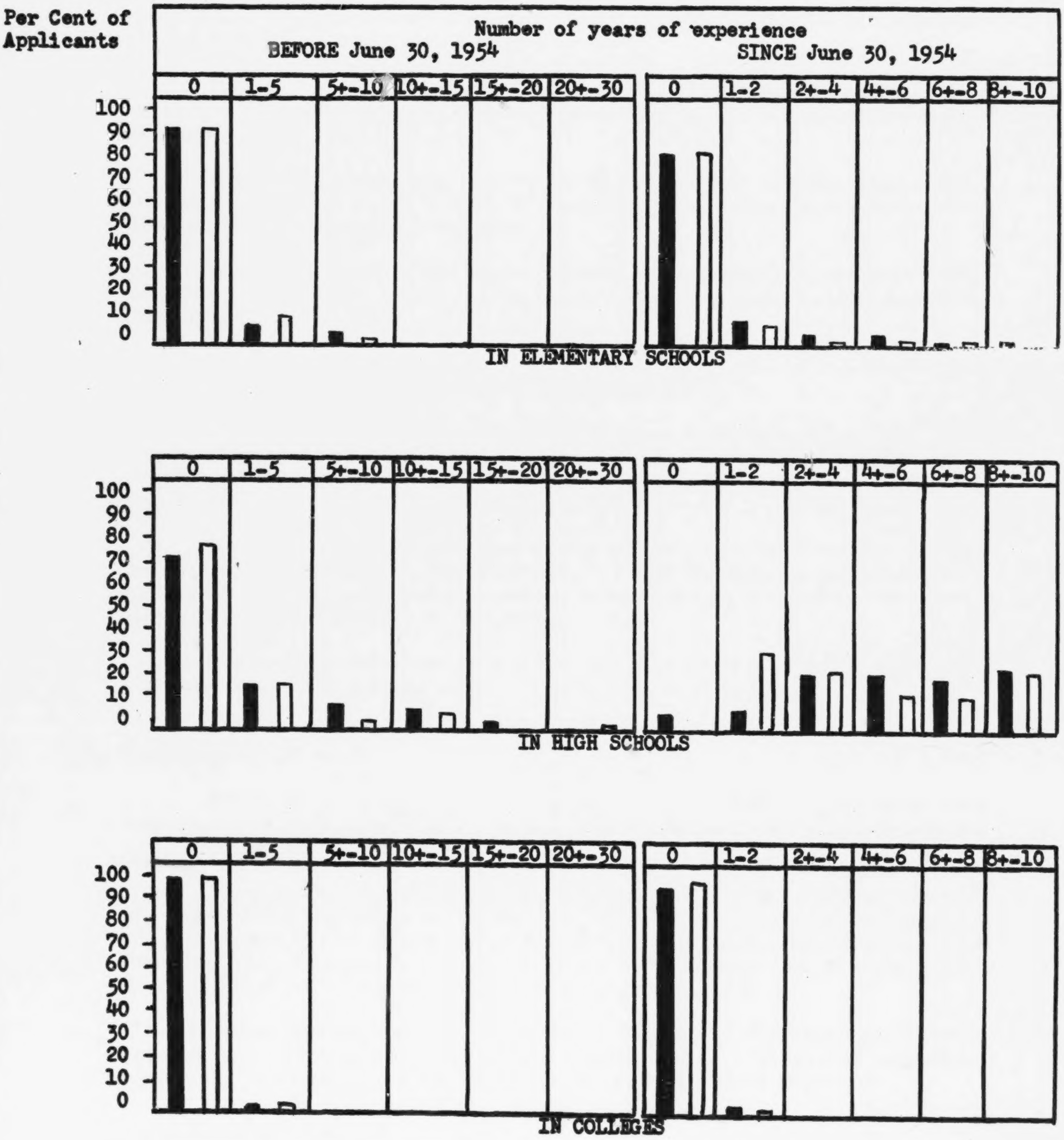
The applicants taught at schools whose enrollment ranged from under 50 to over 5000. The most typical interval was 1000-2499 for the acceptees and 500-999 for the rejectees. Applicants from small schools (enrollment 100-299) had significantly better chances of being accepted than if they taught at any other size of school.

Present teaching emphasis (Tables A-75 and A-76). Mathematics, general science, and biology, in that order, were observed to be the most typical subjects to dominate the teacher's weekly course schedule. Earth science and physics were less frequently seen as chief teaching emphasis. A schedule emphasizing general science was in an applicant's favor.

Where there were more than one subject in a teacher's schedule, the second emphasis was usually on chemistry or physics for the acceptees and on general science or biology for the rejectees.

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

Sample: Secondary Sequential Low



% **Acceptees** ■
% **Rejectees** □

Figure 10

Previous Institute Attendance[+]

NSF Summer Institutes (Table A-77). Forty per cent of the acceptees had never attended a summer institute before, 31.3% had studied at one, and 28.6% had studied at two or more.

NSF In-Service Institutes (Table A-79). Eighteen per cent of the acceptees had attended one in-service institute, and 3.4% had attended two or more.

Other NSF programs (Tables A-78 and A-80 to A-82). There was almost no previous participation in Academic Year, Research Participation, or NSF Fellowship programs.

Approximately 67% of the acceptees had attended some kind of NSF program, usually one or two at the most. Very few had attended non-NSF institutes (Table A-83).

Host Universities Attended for NSF Programs

Number of universities attended (Tables A-84 to A-90). The larger proportion of those who had attended summer institutes did so at one university. However, 15.3% of the acceptees had been participants at two or more universities for summer institutes.

No attendance at more than one university was reported for either the In-Service, Research Participation, or NSF Fellowship programs. Taking all the NSF programs together, attendance at more than one university was reported by 24% of the group.

Consecutive attendance at the same university for two or more NSF institutes or activities was reported by 23.4% of the group.

Professional Interests

Professional journals read regularly (Table A-91). The most frequently reported journals were combinations of education, science-education, and general science types.

Membership in professional organizations (Tables A-92 and A-93). Membership in education organizations only was the most typical category, accounting for 41.3% of acceptees and 48% of rejectees. Members of more than one type of organization, particularly an education and science-education combination, were the next most numberous group.

Approximately two-thirds of the accepted and rejected applicants belonged to both regional and national organizations. "Regional organizations only" accounted for 24.7% of acceptees and 22% of rejectees.

[+] Only acceptees were studied for these items.

Professional interests did not appear to differentiate between acceptees and rejectees.

SECONDARY SEQUENTIAL LOW - SUMMARY OF DIFFERENCES BETWEEN ACCEPTEES AND REJECTEES

Personal variables were not a noticeable factor in selection, with the possible exception of dependent's allowances, where the number of allowances was important, but not in a linear fashion. The acceptees, as a group, requested more allowances than did the rejectees, but those who requested no allowances had better chances of acceptance than those with four.

Location of schools where applicants taught was not important in selection, except in the case of the West North Central region, which sent more acceptees than would be expected by chance.

Educational variables appeared to affect selection somewhat. High undergraduate and graduate grades in several subjects, particularly mathematics, were advantageous. A major in education for the bachelor's degree and having had the bachelor's degree a comparatively long time were found to operate in favor of the applicant.

Only two employment background variables distinguished between acceptees and rejectees. Teaching at schools whose enrollment was between 100 and 299 and having a teaching schedule that primarily emphasized general science was in an applicant's favor. It should be recognized that large numbers of teachers at other sizes of school and with other teaching emphases were accepted.

Chapter 8

SEQUENTIAL INSTITUTES FOR SECONDARY SCHOOL TEACHERS

II. Medium Preparation Level

Of the 148 sequential summer institutes, 40% were designed for participants with a moderate amount of preparation. The Secondary Sequential Medium sample was composed of 400 acceptees and 400 rejectees. The accepted group included 334 males and 66 females, and the rejected group included 339 males and 61 females. Approximately 40% of the accepted and rejected groups had applied to sequential institutes offering "multiple fields" courses. Mathematics institutes accounted for the next largest proportion, 28% of the acceptees and 37% of the rejectees. The remaining applicants were distributed among chemistry, biology, physics, and earth science institutes.

GENERAL CHARACTERISTICS

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Age	33.4 years		31.7 years	
Marital status	Married	(73.0%)	Married	(70.5%)
No. of dependents	2.1[+]	3.0[++]	1.9[+]	2.9[+]
No. of dependent's allowances	1.9[+]	2.8[++]	1.8[+]	2.7[++]
Most undergraduate credits	Education or math	(18.7 hours) (18.8 hours)	Education	(19.8 hours)
Most graduate credits	Education	(7.9 hours)	Education	(6.6 hours)
Highest grades				
undergraduate:	Education	(3.0)	Education	(2.9)
graduate:	Biology	(3.3)	Education	(3.1)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Highest degree	Bachelor's	(74.5%)	Bachelor's	(76.8%)
	Master's	(22.8%)	Master's	(21.5%)
Most frequent major				
Bachelor's:	Science or math	(51.5%)	Science or math	(45.5%)
Master's:	Education	(64.2%)	Education	(59.1%)
(Per cents are of number having the degree)				
Recency of Bachelor's	8.8 years		7.6 years	
Recency of Master's	8.0 years		7.6 years	
Chief teaching emphasis	Mathematics	(42.8%)	Mathematics	(46.8%)
	Chemistry	(19.5%)	General science	(18.0%)
	Biology	(17.3%)	Chemistry	(11.5%)
Professional experience past 5 years	Teach secondary sci. and/or math	(78.3%)	Teach secondary sci. and/or math	(82.8%)
Teaching experience in secondary schools	3.3 years		2.5 years	
Total enrollment of school where applicant taught	1000-2499	(35.8%)	1000-2499	(33.0%)
Mean number of institutes attended				
NSF Summer:	1.3^{+}	1.9^{++}	--	
Total NSF:	1.7^{+}	2.2^{++}	--	
Professional journals	Sci.-educ. and/or general sci.	(30.6%)	Education and/or sci.-educ.	(31.8%)

$^{+}$Mean based on total group

$^{++}$Mean for those with non-zero responses

General Characteristics (continued)

Variable	Acceptees		Rejectees	
	Modal or Mean Responses			
Professional affiliations				
Type:	Education and/or sci. -educ.	(71.3%)	Education and/or sci. -educ.	(77.3%)
Geographic extent	National and regional	(65.0%)	National and regional	(57.0%)
Certification status	Permanent secondary	(80 %)	Permanent secondary	(76.5%)
Certification deficiency	Sci. or math	(8 %)	Sci. or math	(7.3%)

DESCRIPTION AND ANALYSIS OF THE DATA

Personal Variables

Age (Tables 19 and A-1). The mean ages of the acceptees and rejectees were 33.4 years and 31.7 years, respectively. The older the applicant, within certain limits, the greater the probability of acceptance at this institute level. Age was the only personal variable to distinguish between acceptees and rejectees.

Location of Schools Where Applicants Taught

City (Table A-8). A larger proportion of the accepted group (9.5%) than of the rejected group (6.7%) had been teaching in cities with populations of over 1/2 million. According to the 1960 census, these cities accounted for 15.5% of the U. S. population. Cities with populations between 1/4 and 1/2 million yielded 8.4% of acceptees and 6.6% of the rejectees in the sample. Such communities contained 5.9% of the U. S. population. The communities with populations under 1/4 million, which accounted for 78.6% of the U. S. populations, yielded 83% of the acceptees and 87.5% of the rejectees. Thus, more applicants than might be predicted were from the smaller communities, and fewer than might be expected were from the large cities.

State (Tables 21 and A-9). The ratio of acceptees to rejectees was noticeably higher in Arizona, Illinois, Massachusetts, Michigan, Virginia, and Wisconsin, and the ratio of rejectees to acceptees was higher in

California, Mississippi, New York and South Carolina. The apparent differences in group sizes from these states may not be statistically reliable since the numbers involved in each case were small.

The numbers of acceptees and rejectees from each state were, on the whole, proportional to the numbers of U. S. science and mathematics teachers in each state. The largest discrepancies occurred for Wisconsin, which had only 2.2% of the U. S. science teacher population but yielded 4.5% of the high level sequential institute acceptees; and for Texas, which had 6.8% of the U. S. science teacher population, but yielded only 4.2% of the applicants (A's - 4.3%; R's - 4.0%).

Region (Tables 21 and A-10). The East North Central region yielded the greatest number of applicants: 22% of the acceptees and 18.8% of the rejectees. The next largest groups of applicants were from the West North Central and Middle Atlantic regions. Location of school where the applicant taught did not appear to be a factor in selection for this sample of applicants.

When the regional distribution of U. S. science teachers is compared with that of the low level sequential institute applicants, it can be observed that there were more acceptees than might be expected from the East and West North Central regions, and fewer acceptees than might be expected from the South Atlantic and West South Central regions.

Region	Estimated Percentage of All U. S. Science and Mathematics Teachers	Per Cent of Secondary Sequential Medium Institute's Acceptees	Per Cent of Secondary Sequential Medium Institute's Rejectees
New England	6.48	6.8	5.0
Middle Atlantic	16.04	14.8	15.8
East North Central	18.00	22.0	18.8
West North Central	10.14	14.0	15.3
South Atlantic	15.34	11.3	12.5
East South Central	7.50	5.8	7.0
West South Central	12.21	7.3	9.3
Mountain West	4.63	7.0	6.5
Pacific West	9.64	9.3	9.8
Outside U. S.		2.0	.3

Educational Background

Undergraduate semester hours or credits[+] (Tables 22 and A-11 to A-18). All of the applicants reported some undergraduate credits in one or more of the sciences. Over 90% of both the acceptees and rejectees had credits in mathematics and education. Credits in earth science were taken by the smallest proportion of both groups (A's - 38%; R's - 34%). The acceptees had a higher mean number of chemistry credits than did the rejectees, but other than that, undergraduate credits did not distinguish between groups.

Graduate credits (Tables 23 and A-19 to A-26). Graduate credits in the sciences were reported by 76.7% of the acceptees and 41% of the rejectees. Credits in education and mathematics accounted for the largest proportions of the applicants in this sample.

Graduate credits in the sciences appeared to be a distinct factor in selection. The edge in number of credits the acceptees had over the rejectees was significant for every subject but education.

Undergraduate grades (Tables 24 and A-27 to A-33). The mean undergraduate grade-point averages ranged from C+ to B for the acceptees and from C+ to B- for the rejectees. The highest mean grades were observed for education, and the lowest for physics. The acceptees, as a group, had significantly higher grade-point averages than did the rejectees in all subjects except earth science.

Graduate grades (Tables 25 and A-34 to A-40). Mean graduate grade-point averages were all B+ for the acceptees and ranged from B- to B+ for the rejectees. The highest grades were noted for education and the lowest for physics. The acceptees had higher grades than did the rejectees in all subjects, but these differences were significant only in the cases of biology and education.

Major subject for the Bachelor's degree (Table A-47). Approximately half of the applicants majored in a science or mathematics for the bachelor's degree, the acceptees more so than the rejectees. Education as a major accounted for 11% of the acceptees and 15.8% of the rejectees. A non-science major was next most typical and was observed for 9% of the acceptees and 11.8% of the rejectees.

Major subject for the Master's degree (Table A-48). For the 23.7% of the acceptees and 22% of the rejectees who had the master's degree, the most popular major was education. The balance majored either in a science or mathematics, or in an education curriculum that emphasized science or mathematics.

Majors for the undergraduate and advanced degrees did not appear to influence selection in this sample.

[+] Credits and grades in engineering will not be discussed for the secondary teacher samples.

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: SECONDARY SEQUENTIAL MEDIUM

(The states of Hawaii and Alaska are in the Pacific division and the West region.)

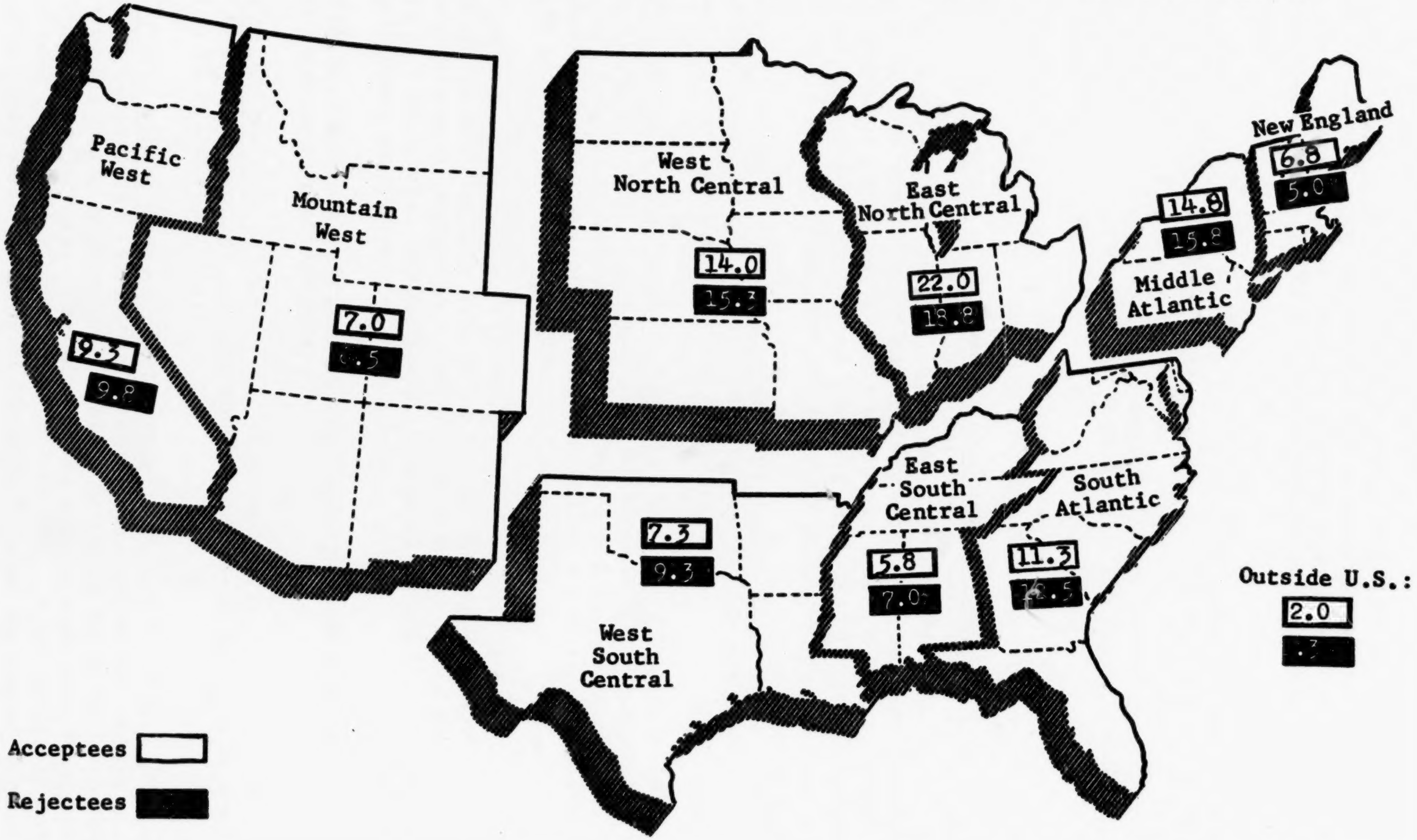

Pacific West
9.3
9.8
Mountain West
7.0
6.5
West North Central
14.0
15.3
East North Central
22.0
18.8
New England
6.8
5.0
Middle Atlantic
14.8
15.8
West South Central
7.3
9.3
East South Central
5.8
7.0
South Atlantic
11.3
12.5
Outside U.S.:
2.0
.3
% Acceptees
% Rejectees

Figure 11

Highest degree earned (Table A-50). Only two individuals in each group had no degree. Approximately 75% of each group had the bachelor's as the highest degree earned, and the balance had earned the master's. The distributions of acceptees and rejectees on this variable were approximately equal.

Recency of degrees (Tables 26, A-51, and A-52). The mean number of years since the bachelor's degree was earned was significantly greater for acceptees (8.8 years) than for rejectees (7.6 years). The master's degree for those among the acceptees and rejectees who had attained it had been held an average of 8 years and 7.6 years, respectively.

Employment Background

Number of years of experience teaching specific subjects (Tables 27 and A-61 to A-67). More teaching experience was reported for mathematics than for any other subject, by both acceptees and rejectees. For those in the groups who actually had mathematics teaching experience, the average number of years was 6.0 for acceptees and 4.8 for rejectees. The number of years of experience teaching in each of the other fields, for the experienced groups only, was usually between 4 and 5.

Acceptees as a group had more experience than rejectees only in mathematics, chemistry, and general science, and the differences were significant only for mathematics and chemistry.

Professional experience during past five years (Table A-68). Teaching science and/or mathematics in high schools was the predominant professional activity of both acceptees (78.3%) and rejectees (82.8%). Approximately 11% of each group had been teaching a non-science subject in addition to science or mathematics.

Teacher certification (Tables A-69 and A-70). Permanent secondary credentials were held by 80% of the acceptees and 76.5% of the rejectees. Provisional or temporary credentials, held by 12.5% and 19.5% of the acceptees and rejectees, respectively, tended to lessen the chances for acceptance to these institutes.

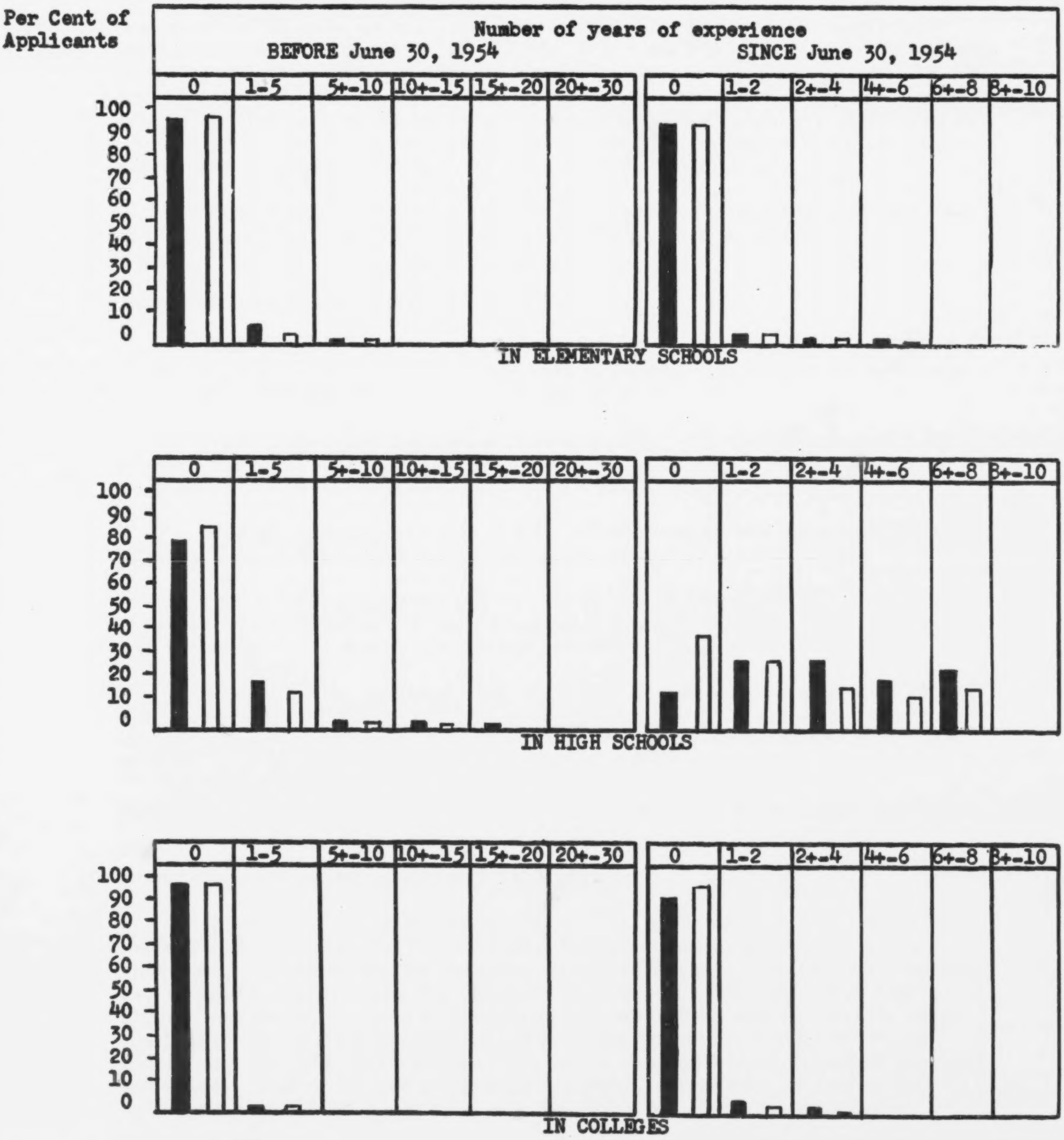
The certification deficiencies reported by 18.2% of each group were mostly in science or mathematics.

Present position (Table A-71). The category, "teacher", accounted for over 90% of both groups. Department heads made up 5.5% of the acceptees and 3.5% of the rejectees.

Type of school where applicant taught (Tables A-72 to A-74). Private schools contributed 11% of the acceptees and 8% of the rejectees. Teachers at the junior high school level made up 12.5% of the acceptees and 25.3% of the rejectees. Teaching at the senior high level was more typical of both groups (A's - 59.3%; R's - 45.8%). Approximately one-fifth of each group were teaching at combined junior and senior high schools.

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

Sample: Secondary Sequential Medium



% Acceptees ■
% Rejectees □

Figure 12

Applicants had significantly better chances of being accepted if they came from private schools and were teaching at the senior high level only.

Present teaching emphasis (Tables A-75 and A-76). Mathematics was most often seen as the primary teaching emphasis in the applicants' weekly course schedules (A's - 42.8%; R's - 46.8%). Next most frequently noted as chief teaching emphases for the acceptees were chemistry (19.5%) and biology (17.3%), and for the rejectees, general science (18%). Least often reported was earth science. A chief teaching emphasis in biology or chemistry tended to increase the probability of acceptance to these institutes, and in general science, to decrease that probability.

The second teaching emphasis, when there was more than one subject in a teacher's schedule, was usually in general science.

Previous Institute Attendance[+]

NSF Summer Institutes (Table A-77). Twenty-nine per cent of the acceptees had never attended a Summer Institute, 32.3% had attended one, previously, and 38.8% had attended two or more.

NSF In-Service Institutes (Table A-79). Participation at one In-Service institute was reported by 18% of the acceptees, and at two or more by 9.2%.

NSF Fellowships (Table A-81). Fellowships had been held for one year by 6 acceptees, and for two or more years by 4 acceptees.

Other NSF programs (Tables A-78, A-80, and A-82). Five acceptees reported attendance at one Academic Year institute and four acceptees had taken part in a Research Participation program.

Participation in some kind of NSF program was reported by 79% of the acceptees. Of those who had been previous attendees, approximately one-third had participated in one session, and one-third had participated in two. The balance (34%) had attended three or more NSF programs.

Only 5% of the acceptees reported attendance at non-NSF institutes.

Host Universities Attended for NSF Programs

Number of universities attended (Tables A-84 to A-90). Approximately 74% of those who had attended Summer Institutes did so at one university. Looking at the accepted group as a whole, 18.6% had attended two or more universities for Summer Institutes. The only other NSF programs that were involved in attendance at more than one university were the In-Service institutes, where 3.8% of the acceptees attended two or more, and the NSF Fellowships, for which one individual attended two universities. Taking all the programs together, attendance at two or more universities for NSF programs was noted for 31.3% of the acceptees.

[+] Only acceptees were studied for these items.

Consecutive attendance at the same university for two or more NSF institutes or activities was reported by 31.8% of the acceptees.

Professional Interests

Professional journals read regularly (Table A-91). The most frequently reported journals were combinations of education, science-education, and general science journals. The reading of general science and science-education journals may have been related to factors that increased the probability of selection.

Membership in professional organizations (Tables A-92 and A-93). Membership in organizations that included both education and science-education types was most typical of the acceptees, while membership in education organizations only was most typical of the rejectees. To have been affiliated only with education organizations decreased the probability of acceptance. Only 3.1% of the acceptees and 1.1% of the rejectees were members of organizations oriented toward science rather than teaching.

The larger part of both the accepted and rejected groups was affiliated with both regional and national organizations. Membership in regional organizations only, observed for 18.3% of acceptees and 28% of rejectees, was the next largest category, and to have had only regional affiliations was disadvantageous to the applicant.

SECONDARY SEQUENTIAL MEDIUM - SUMMARY OF DIFFERENCES BETWEEN ACCEPTEES AND REJECTEES

With the exception of age, personal variables were not noticeably effective in selection to the medium level sequential institutes. The older the applicant, within limits, the greater the probability of acceptance.

Educational background variables were more influential in selection. The greater the number of undergraduate credits in the sciences, particularly chemistry, and the number of graduate credits in biology, chemistry, physics, mathematics and earth science, the greater were the chances of acceptance. The better the performance in most of these subjects, especially on the undergraduate level, the greater also were the chances of acceptance.

Employment variables apparently acted somewhat as selection criteria. Teaching in private schools, teaching at a senior high level only, and having comparatively large amounts of teaching experience in chemistry or mathematics were factors that acted in the applicant's favor. Being fully accredited at the secondary level and having a teaching schedule that emphasized biology or chemistry were also advantageous.

Professional interests seemed to enter into selection considerations in that a preference was observed for somewhat science-oriented journals and professional affiliations.

Chapter 9

SEQUENTIAL INSTITUTES FOR SECONDARY SCHOOL TEACHERS

III. High Preparation Level

Approximately 20% of the 148 sequential summer institutes in 1964 were designed for participants with considerable preparation in the specified fields. Mathematics institutes accounted for 47% of the acceptees and 46.5% of the rejectees in the sample. Multiple fields and biology institutes attracted the next largest groups of applicants.

The Secondary Sequential High sample consisted of 200 acceptees of whom 159 were male and 41 were female, and of 200 rejectees, of whom 173 were male and 27 were female.

GENERAL CHARACTERISTICS

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Age	31.2 years		31.3 years	
Marital status	Married	(69.5%)	Married	(73.0%)
No. of dependents	2.0[+]	3.1[++]	1.9[+]	2.8[++]
No. of dependent's allowances	1.9[+]	2.9[++]	1.8[+]	2.6[++]
Most undergraduate credits	Math	(23.9 hours)	Math	(23.3 hours)
Most graduate credits	Math	(8.0 hours)	Education	(4.7 hours)
Highest grades undergraduate:	Education	(3.1)	Education	(2.9)
graduate:	Biology Physics	(3.3) (3.3)	Earth science	(3.3)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Highest degree	Bachelor's	(82.0%)	Bachelor's	(78.0%)
	Master's	(17.0%)	Master's	(19.0%)
Most frequent major				
Bachelor's:	Science or math	(61.5%)	Science or math	(52.8%)
Master's	Education	(62.8%)	Science or math	(43.6%)
(Per cents are of number having the degree)				
Recency of degrees				
Bachelor's:	6.9 years		6.9 years	
Master's	6.7 years		7.1 years	
Chief teaching emphasis	Mathematics	(64.5%)	Mathematics	(62.5%)
	Biology	(16.0%)	Biology	(17.0%)
	Chemistry	(6.5%)	Chemistry	(8.0%)
Professional experience past 5 years	Teach secondary sci. and/or math	(92.0%)	Teach secondary sci. and/or math	(81.5%)
Teaching experience in secondary schools	2.8 years		2.6 years	
Total enrollment of school where applicant taught	1000-2499	(35.5%)	1000-2499	(37.0%)
Mean number of institutes attended				
NSF Summer:	1.6[+]	2.1[++]	--	
Total NSF:	1.9[+]	2.4[++]	--	
Professional journals	Education and/or sci.-educ.	(41.5%)	Education and/or sci.-educ.	(38.0%)
Professional affiliations				
Type:	Education and/or sci.-educ.	(72.0%)	Education and/or sci.-educ.	(78.0%)
Geographic extent:	National and regional	(62.5%)	National and regional	(60.0%)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Certification status	Permanent secondary	(78.0%)	Permanent secondary	(77.0%)
Certification deficiency	Sci. or math	(5.0%)	Sci. or math	(4.5%)

DESCRIPTION AND ANALYSIS OF THE DATA

Location of Schools Where Applicants Taught

City (Table A-8). Communities with populations of under 1/4 million, which made up 78.6% of the U. S. population in 1960, accounted for 80% of the acceptees and 86.5% of the rejectees. Cities whose populations were between 1/4 and 1/2 million, who made up 5.9% of the U. S. population, contributed 8% of the acceptees and 6.5% of the rejectees. The cities of over 1/2 million, which made up 15.5% of the U. S. population, contributed 11% of the acceptees and 7% of the rejectees. City where the applicant taught did not distinguish between acceptees and rejectees.

State (Tables 21 and A-9). The ratio of acceptees to rejectees was noticeably higher from Ohio, Illinois, Minnesota, and Kansas. Due perhaps to the small sample sizes involved in each state, none of these differences was significant except that for Illinois.

When the distributions of acceptees and rejectees throughout the states are compared to the distribution of all U. S. secondary school science and mathematics teachers, it can be observed that there were more acceptees than might be expected from New York, New Jersey, Ohio, Illinois, Minnesota, and Kansas, and fewer applicants than might be expected from Texas. (The accepted and rejected groups from Texas were the same size.)

Region (Tables 21 and A-10). The East North Central region contributed more acceptees (32.5%) and rejectees (19.5%) than did any other region, and teaching in that area was to an applicant's advantage.

The following chart compares the regional distribution of U. S. science and mathematics teachers with those of the high level sequential institutes applicant groups.

Region	Estimated Percentage of All U. S. Science and Mathematics Teachers	Per Cent of Secondary Sequential High Institute's Acceptees	Per Cent of Secondary Sequential High Institute's Rejectees
New England	6.48	4.5	6.0
Middle Atlantic	16.04	19.5	19.0
East North Central	18.00	32.5	19.5
West North Central	10.14	19.5	18.5
South Atlantic	15.34	4.5	9.5
East South Central	7.50	1.5	5.5
West South Central	12.21	9.0	9.5
Mountain West	4.63	2.0	4.5
Pacific West	9.64	6.5	7.5
Outside U. S.		.5	.5

Several discrepancies between size of applicant group and size of teacher population may be noted, particularly in the East and West North Central regions, where there were more applicants than might be expected, and in the South Atlantic and East and West South Central regions, where there were fewer applicants than might be expected.

Educational Background

Undergraduate semester hours or credits[+] (Tables 22 and A-11 to A-18). The average number of undergraduate credits was highest in mathematics for both acceptees (23.9 hours) and rejectees (23.3 hours). Education, biology, and chemistry, in that order, were the next largest categories. In all subjects except earth science and education, the acceptees had the higher mean number of credits, but the difference was reliable only for physics (A's - 10.2 hours; R's - 7.5 hours).

Graduate credits (Tables 23 and A-19 to A-26). The highest average number of graduate credits was in mathematics for the acceptees (8 hours) and in education for the rejectees (4.7 hours). The acceptees

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[+] Engineering courses will not be noted for the secondary groups.

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: SECONDARY SEQUENTIAL HIGH

(The states of Hawaii and Alaska are in the Pacific division and the West region.)

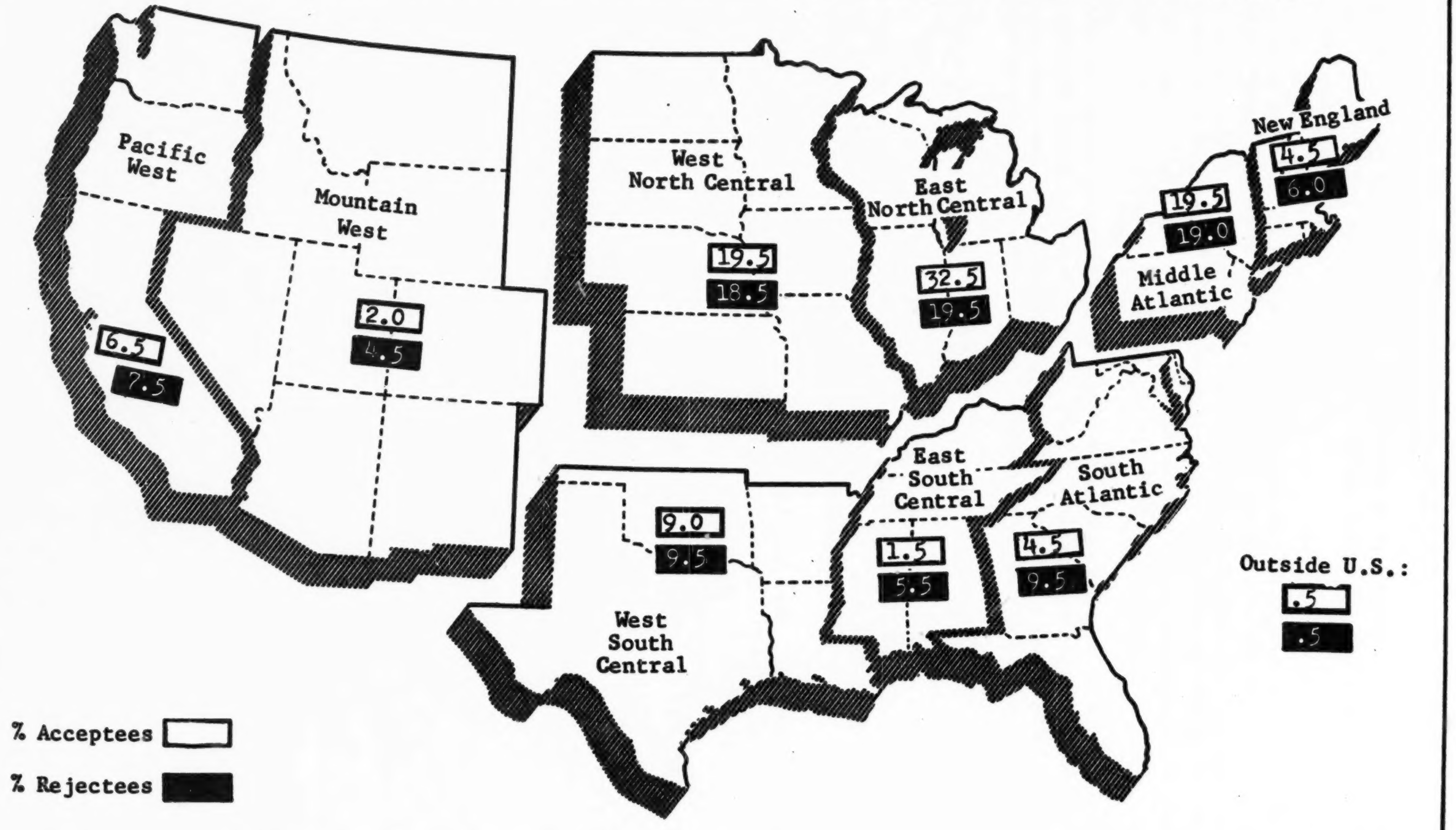
Pacific West
6.5
7.5
Mountain West
2.0
4.5
West North Central
19.5
18.5
East North Central
32.5
19.5
Middle Atlantic
19.5
19.0
New England
4.5
6.0
West South Central
9.0
9.5
East South Central
1.5
5.5
South Atlantic
4.5
9.5
Outside U.S.:
.5
.5
% Acceptees
% Rejectees

Figure 13

had the greater average number of credits in every subject, and the differences were reliable for all the sciences taken together and for chemistry, physics, and mathematics in particular.

Grades (Tables 24 and 25, and A-27 to A-40). The undergraduate mean grade-point averages ranged from B- to B+ for the acceptees, and from C+ to B- for the rejectees. The highest of these average grades was for education courses. The graduate averages ranged from B- to B+ for both groups. The highest acceptee grades were in biology (3.3) and the highest rejectee grades were in earth science (3.3).

The accepted group had the higher average grades in all subjects except graduate level earth science. The difference between acceptee and rejectee grades was statistically significant for all the undergraduate subjects, and for graduate level biology, chemistry, and physics.

Major subject for Bachelor's degree (Table A-47). The major for the bachelor's degree was most typically in a science or mathematics (A's - 61.5%; R's - 52.8%). The next largest category was education in a science or mathematics field, which accounted for 23% of the acceptees and 30% of the rejectees in the sample. Major for the bachelor's degree did not distinguish between acceptees and rejectees.

Major subject for Master's degree (Table A-48). Education was the most frequent graduate major of the 17% of the acceptees who had reported a master's degree, and science (or mathematics) and education were equally prevalent among the rejectees as graduate majors. The graduate major, like the undergraduate, did not distinguish between groups.

Highest degree earned (Table A-50). Only one individual, a rejectee, had no degree. The bachelor's as highest degree was reported by 83% of the acceptees and 79.5% of the rejectees. The highest degree of the remaining groups was the master's, except for one rejectee who had attained the doctorate.

Recency of degrees (Tables 26, A-51, and A-52). The average length of time since the bachelor's degree was earned was approximately 6.9 years for both acceptees and rejectees. The master's had been held an average of 6.7 years by the acceptees and 7.1 years by the rejectees.

Employment Background

Number of years of experience teaching specific subjects (Tables 27 and A-61 to A-67). Looking at the data only for those with teaching experience in the specified fields, it appears that mathematics was the subject taught for the longest periods by both the acceptees (5.4 years) and the rejectees (5.5 years). In addition, teaching experience in mathematics was reported by more than 75% of the applicants, while teaching the other subjects listed was reported by considerably fewer applicants.

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

Sample: Secondary Sequential High

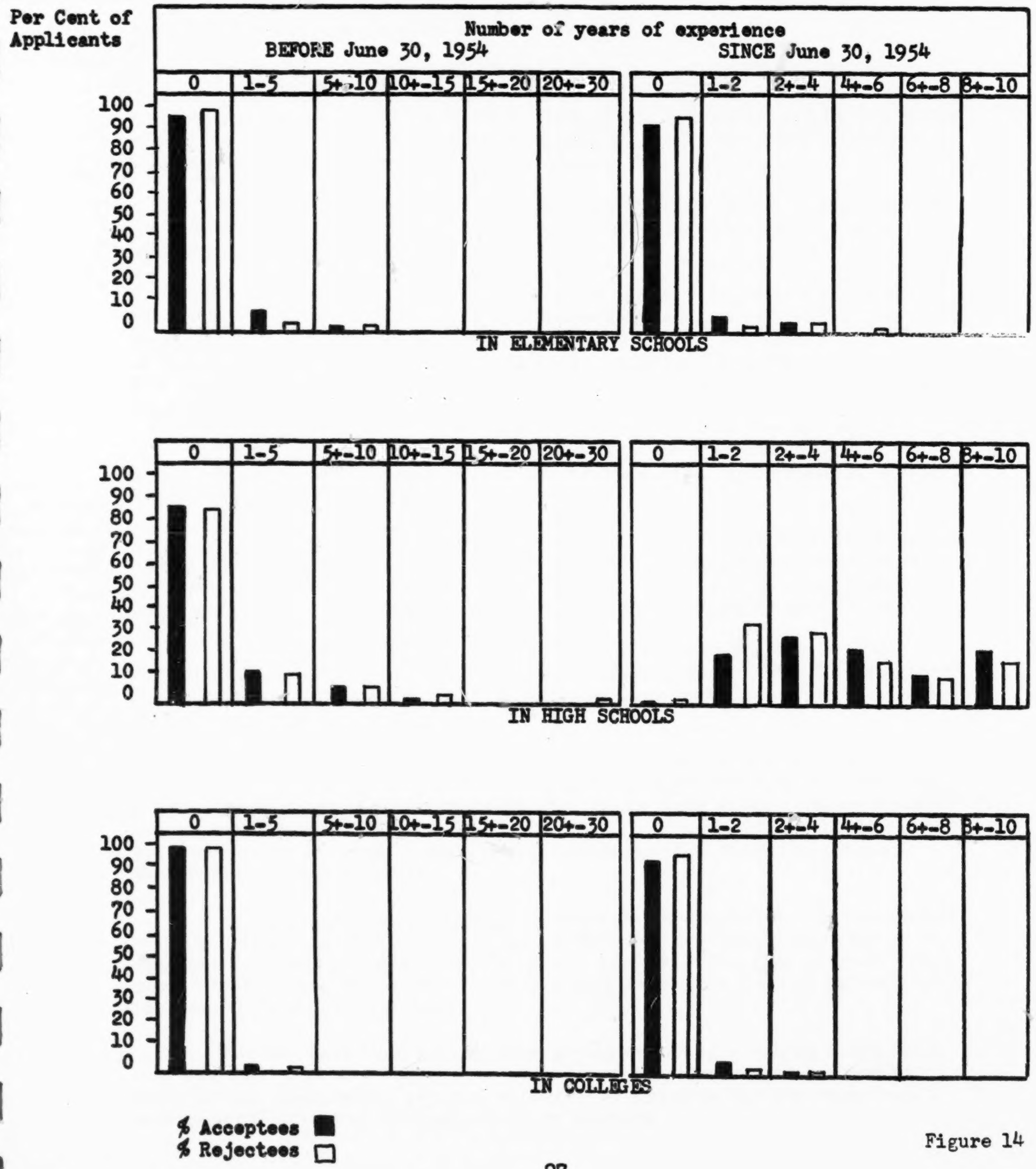

Figure 14

Biology was second in number of years of teaching experience for both acceptees and rejectees.

In no case was teaching experience observed to differentiate between acceptees and rejectees in this sample.

Professional experience during past five years (Table A-68). Teaching secondary school level science and/or mathematics had been the predominant professional activity of 92% of the acceptees and 81.5% of the rejectees for the five years preceding application to the 1964 institutes. This background was favored in selection.

The next largest category, reported by 4.5% of the acceptees and by 13% of the rejectees, was teaching non-science subjects in addition to science or mathematics.

Teacher certification (Tables A-69 and A-70). Permanent secondary credentials were held by 78% of the acceptees and 77% of the rejectees. Provisional certification was reported by 14% of the acceptees and 17.5% of the rejectees, and no certification was reported by 4.5% of each group. The remaining individuals in the sample, 7 acceptees and 1 rejectee, were accredited at the junior college level.

Certification deficiencies, reported by 14.5% of each group, were about evenly divided among education, science, and mathematics, at the secondary school level.

Present position (Table A-71). Approximately 90% of the accepted and rejected applicants were classified as teachers. Department heads made up the next largest category (A's - 7%; R's - 4.5%). The balance were principal-teachers, supervisors, or junior college instructors.

Type of school where applicant taught (Tables A-72 to A-74). Private schools contributed 16% of the acceptees and 12% of the rejectees in the sample. (The data for this item are open to question because of the large number of "no entries".)

Most of the applicants were teaching at senior high schools (A's - 67%; R's - 59.5%). About 12% of each group were teaching at junior high schools, and most of the remaining applicants were from combined junior-senior high schools (A's - 12.5%; R's - 20%). Senior high school teachers appeared to be favored in selection over teachers from the combined junior-senior high schools.

Present teaching emphasis (Tables A-75 and A-76). Mathematics was the subject most often reported as the chief teaching emphasis in an applicant's schedule (A's - 64.5%; R's - 62.5%). The next largest category was biology, which was chief teaching emphasis for 16% of the acceptees and 17% of the rejectees.

Slightly less than half of each group reported teaching more than one subject. For the acceptees, the second teaching emphasis was typically either chemistry, general science, or physics; for the rejectees it was general science, mathematics, or physics.

Previous Institute Attendance[+]

NSF Summer Institutes (Table A-77). Previous attendance at NSF Summer Institutes was reported by 74.5% of the acceptees in this sample. One institute was attended previously by 25% of the group, and two or more by 49.5%.

Other NSF programs (Tables A-78 to A-82). The In-Service Institutes were second to the Summer Institutes in number of previous participants from the high level sequential institutes sample. Twenty-one per cent of the acceptees had attended one, and 6% had attended two or more.

Previous participation in Academic Year Institutes, Research programs, or Fellowship programs, were reported by few individuals in the sample.

Taking all the NSF programs together, 80% of the acceptees in 1964 had participated previously in some type of NSF program, and 58% in two or more.

Only two individuals reported participating in non-NSF institutes (Table A-83).

Host Universities Attended for NSF Programs

Number of universities attended (Tables A-84 to A-90). Approximately one-third of those who had attended summer institutes previously had done so at more than one university. Few had attended more than one university for any of the other individual NSF programs. Taking all the programs together, however, 28% of the acceptees had attended two universities and 13% had attended 3 or more for these programs.

Two or more consecutive attendances at the same university for NSF-sponsored studies were observed for 37% of the group.

Professional Interests

Professional journals read regularly (Table A-91). The greater part of the accepted and rejected groups reported reading only journals oriented to the teaching field. These, classified as "education" and "science-education", accounted for 41.5% of the acceptees and 38% of the rejectees. Purely science-oriented journals, i.e., those with general science or special science content, were reported by 6% of the acceptees and 8% of the rejectees. Slightly more than half of the applicants had been reading both science and education journals.

Membership in professional organizations (Tables A-92 and A-93). Affiliations with organizations concerned with education generally or education in the sciences were reported by 72% of the acceptees and 78% of the

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[+] Only acceptees were studied for these items.

rejectees. Only 3% of the acceptees and 1.5% of the rejectees belonged to general science or special science organizations. To have been affiliated solely with education organizations operated somewhat against the applicant.

Almost two-thirds of each group were members of both regional and national organizations. Membership in only regional organizations was reported by 18.5% of the acceptees and 27.5% of the rejectees, and such restricted affiliations appeared to be a disadvantage in selection.

SECONDARY SEQUENTIAL HIGH - SUMMARY OF DIFFERENCES BETWEEN ACCEPTEES AND REJECTEES

The applicants to the high level sequential institutes in 1964 could be characterized as teachers with experience largely in mathematics and biology, whose extracurricular professional activities were education-oriented rather than science-oriented.

The acceptees and rejectees as groups were quite similar in their attributes, with the major exception of academic performance. The acceptees had significantly more undergraduate credits in physics and graduate credits in chemistry, physics, and mathematics, than did the rejectees. The acceptees also had significantly higher grades in almost all the undergraduate and graduate subjects listed.

The differences outside of educational background were scattered among a few variables. It was to an applicant's advantage to have come from the East North Central region, to have been teaching at a strictly senior high school, and to have been affiliated with other than purely education or solely regional organizations.

Chapter 10

SUMMER INSTITUTES FOR COLLEGE TEACHERS

I. Low Preparation Level

Eighty summer institutes for college teachers were offered in 1964, four of them for participants with little or no preparation in the specified fields. One institute was in anthropology, two were in engineering, and one was in applied mathematics for technical institute teachers. The engineering and anthropology institutes attracted the most applicants (43.6% and 39.6%, respectively), and the engineering institutes evidently had more places for participants than did the others.

The College Low sample was composed of 119 male and 6 female acceptees, and 112 male and 13 female rejectees.

GENERAL CHARACTERISTICS

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Age	39.9 years		40.0 years	
Marital status	Married	(88.0%)	Married	(86.4%)
No. of dependents	2.7[+]	3.1[++]	2.6[+]	3.0[++]
No. of dependent's allowances	2.6[+]	2.9[++]	2.3[+]	2.8[++]
Most undergraduate credits	Math	(16.2 hours)	Math	(11.3 hours)
Most graduate credits	Education	(8.9 hours)	Education	(9.6 hours)
Highest grades				
undergraduate:	Education	(3.1)	Education	(3.0)
graduate:	Earth science	(3.6)	Education	(3.4)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

	Modal or Mean Responses			
Variable	**Acceptees**		**Rejectees**	
Highest degree	Bachelor's	(16.0%)	Bachelor's	(13.6%)
	Master's	(63.2%)	Master's	(64.0%)
	Doctor's	(15.2%)	Doctor's	(22.4%)
Most frequent major				
Bachelor's	Science or math	(58.1%)	Non-sci. subject	(45.9%)
Master's	Science or math	(46.9%)	Science or math	(42.4%)
(Per cents are of number having the degree)				
Recency of degrees				
Bachelor's:	13.8 years		15.0 years	
Master's:	8.7 years		8.7 years	
Chief teaching emphasis	Physics	(46.4%)	Physics	(28.0%)
	Non-science	(16.8%)	Social science	(28.0%)
	Social science	(16.0%)	Non-science	(22.4%)
Professional experience past 5 years	Teach college sci. and/or math	(68.0%)	Teach college sci. and/or math	(38.4%)
			or non-sci.	(38.4%)
Teaching experience in colleges	3.3 years		3.5 years	
Total enrollment of college where applicant taught	5000 or more	(24.0%)	1000-2499	(24.0%)
Mean number of institutes attended				
NSF Summer:	0.7[+]	1.8[++]	--	
Total NSF:	0.8[+]	2.0[++]	--	
Professional journals	Special sci. and/or sci.-educ.	(38.4%)	Special sci. and/or general sci.	(40.0%)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Professional affiliations				
Type:	Education and/or sci.-educ.	(36.8%)	Education and/or sci.-educ.	(32.0%)
Geographic extent:	National orgs. only	(44.8%)	National orgs. only	(41.6%)

DESCRIPTION AND ANALYSIS OF THE DATA

Location of Schools Where Applicants Taught

State (Tables 21 and A-9). The ratio of acceptees to rejectees in each state was fairly close to one except for California, where the ratio was more than two to one.

Region (Tables 21 and A-10). The Pacific West contributed the largest number of applicants to the low level college institutes, and selection favored those who taught in that region. There were apparent, but non-significant differences in the sizes of the acceptee and rejectee groups in three other regions: the ratio of acceptees to rejectees was less than one in the East and West North Central regions, and was greater than one in the West South Central region.

The following chart compares the regional distribution of the U. S. college teacher population with that of the applicants to the low level college institutes. It will be noted that the Middle Atlantic states contributed fewer applicants than might be expected, and that the West South Central and Pacific West regions contributed more applicants than might be expected. However, the comparison is with the total U. S. college teacher population, not just science and mathematics teachers. Further, it should be remembered that the actual numbers represented by the percentages are small. (In this sample N = 125 acceptees and 125 rejectees.)

	Per Cent of All U.S. College Teachers	Per Cent of College Low Institute's Acceptees	Per Cent of College Low Institute's Acceptees
New England	7.8	5.6	4.8
Middle Atlantic	20.5	13.6	12.8
East North Central	19.0	12.8	20.8
West North Central	9.3	6.4	10.4
South Atlantic	12.4	11.2	12.0
East South Central	5.2	3.2	6.4
West South Central	8.7	14.4	9.6
Mountain West	3.9	4.8	7.2
Pacific West	13.1	26.4	14.4
Outside U. S.		1.6	1.6

Educational Background

Undergraduate semester hours or credits (Tables 22 and A-11 to A-18). The average number of undergraduate credits was highest in mathematics for both acceptees (16.2 hours) and rejectees (11.3 hours). Engineering, physics, and education were the next largest categories for the acceptees, and education, biology, and chemistry were the next largest for the rejectees. Except for biology and education, the accepted group had more undergraduate credits than did the rejected group in all the listed subjects. These differences were significant for all science credits together, and for engineering, physics, and mathematics in particular. Since the largest participant group at the low level college institutes were at engineering institutes, this finding is to be expected.

Graduate credits (Tables 23 and A-19 to A-26). The highest average number of graduate credits for this sample was in education for both acceptees (8.9 hours) and rejectees (9.6 hours). The next largest category for both groups was mathematics (A's - 5.0 hours; R's - 5.4 hours).

Credits in physics and engineering tended to be advantageous for selection, but credits in biology tended to reduce the chances for acceptance to these institutes.

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: COLLEGE LOW

(The states of Hawaii and Alaska are in the Pacific division and the West region.)

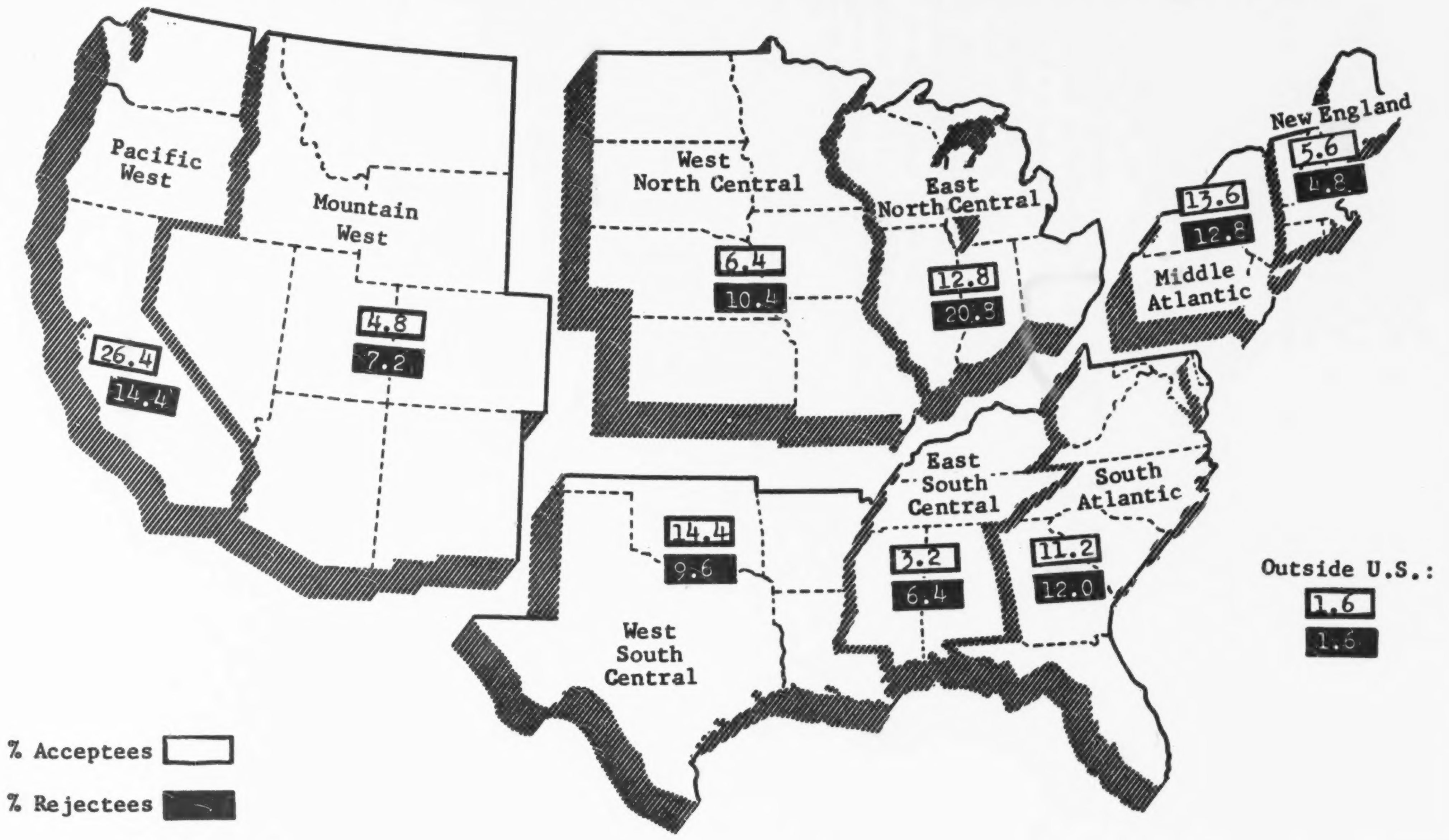
Pacific West
26.4
14.4
Mountain West
4.8
7.2
West North Central
6.4
10.4
East North Central
12.8
20.8
Middle Atlantic
13.6
12.8
New England
5.6
4.8
West South Central
14.4
9.6
East South Central
3.2
6.4
South Atlantic
11.2
12.0
Outside U.S.:
1.6
1.6
% Acceptees
% Rejectees

Figure 15

Grades (Tables 24 and 25, and A-27 to A-40). The undergraduate mean grade-point averages for each group ranged from B- to B+. The highest undergraduate grades were found to be in education and engineering for the acceptees, and in education and earth science for the rejectees. The lowest grade-point averages were in physics and chemistry.

With the exception of engineering grades, there were virtually no differences between acceptee and rejectee undergraduate averages. The edge that the acceptees showed in engineering was not a statistically reliable one.

The graduate grades for both groups were generally in the B+ range. The highest graduate grades could be observed for earth science, engineering, and education. High grades in physics appeared to be advantageous for selection.

Major subject for Bachelor's degree (Table A-47). A science or mathematics undergraduate major, the most typical major of the accepted group, was advantageous in selection, and a non-science major (other than education), most typical of the rejected group, was disadvantageous. A good-sized proportion of each group who had the bachelor's degree had majored in a non-science field only (A's - 24.8%; R's - 45.9%).

Major subject for Master's degree (Table A-48). For the 78.4% of the acceptees and 84.8% of the rejectees in this sample who held the master's degree, the most frequent major was in science or mathematics (A's - 46.9%; R's - 42.4%). However, sizeable groups had majored in education (A's - 24.5%; R's - 14.2%) and in non-science fields (A's - 22.4%; R's - 34.0%). Major for the master's did not distinguish between acceptees and rejectees.

Major subject for the Doctorate (Table A-49). The doctorate was held by 15.2% of the acceptees and by 22.4% of the rejectees in the College Low sample. The most frequent majors were found to be in the fields of science or mathematics, and the second most frequent were in non-science fields other than education.

Highest degree earned (Table A-50). The classification "no degree" was observed for 5.6% of the acceptees in this sample. All of these were accepted to institutes for technical school teachers.

The bachelor's was the highest degree earned for 16% of the acceptees and for 13.6% of the rejectees; the master's for 63.2% of the acceptees and 64.0% of the rejectees; and the doctorate for 15.2% of the acceptees and 22.4% of the rejectees. Evidently the low level college institutes tended somewhat to reject those who had the doctorate, but this finding is inconclusive.

Employment Background

Number of years of experience teaching specific subjects (Tables 27 and A-61 to A-67). Those among the acceptees who had teaching experience in the specified fields had more years of experience, on the average, in physics (7 years) and mathematics (6.8 years) than in the other fields. (For the 60 acceptees who had taught "other subjects", i.e., technical subjects or engineering, the average number of years was 7.3.)

The rejectees as a group had more years of teaching experience in mathematics (8.1 years), biology (7.8 years), and chemistry (7.4 years), than in the other subjects listed.

Amount of teaching experience did not appear to affect selection to the low level college institutes.

Professional experience during past five years (Table A-68). Teaching college level science and/or mathematics had been the predominant professional activity of 68% of the acceptees and 38.4% of the rejectees, and such a background was distinctly in the applicant's favor. Teaching college level subjects that were in non-science, non-mathematics fields accounted for another 38.4% of the rejected group, and that background tended to decrease the chances for acceptance.

Present position (Table A-71). The classification, "professor or instructor" accounted for 90.4% of each group. The remaining applicants were department heads, with the exception of one rejectee who was a supervisor.

Present teaching emphasis (Tables A-75 and A-76). Teaching at the college level usually involves one field. Physics was observed to dominate the schedules of the acceptees more frequently than any other subject, and social science and non-science subjects were next most frequent. Physics and social science were equally prominent as the principal subject of the rejectees, and teaching a non-science was next most typical. Teaching physics tended to increase the chances for selection, while teaching social science tended to decrease these chances.

For those in the sample who were teaching more than one subject, mathematics was most frequently the second teaching emphasis.

Previous Institute Attendance[+]

NSF Summer Institutes (Table A-77). Approximately 61% of the acceptees had never attended a summer institute previously. Of those who had, half had attended one, and half had attended two or more.

[+] Only acceptees were studied for these items.

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

Sample: College Low

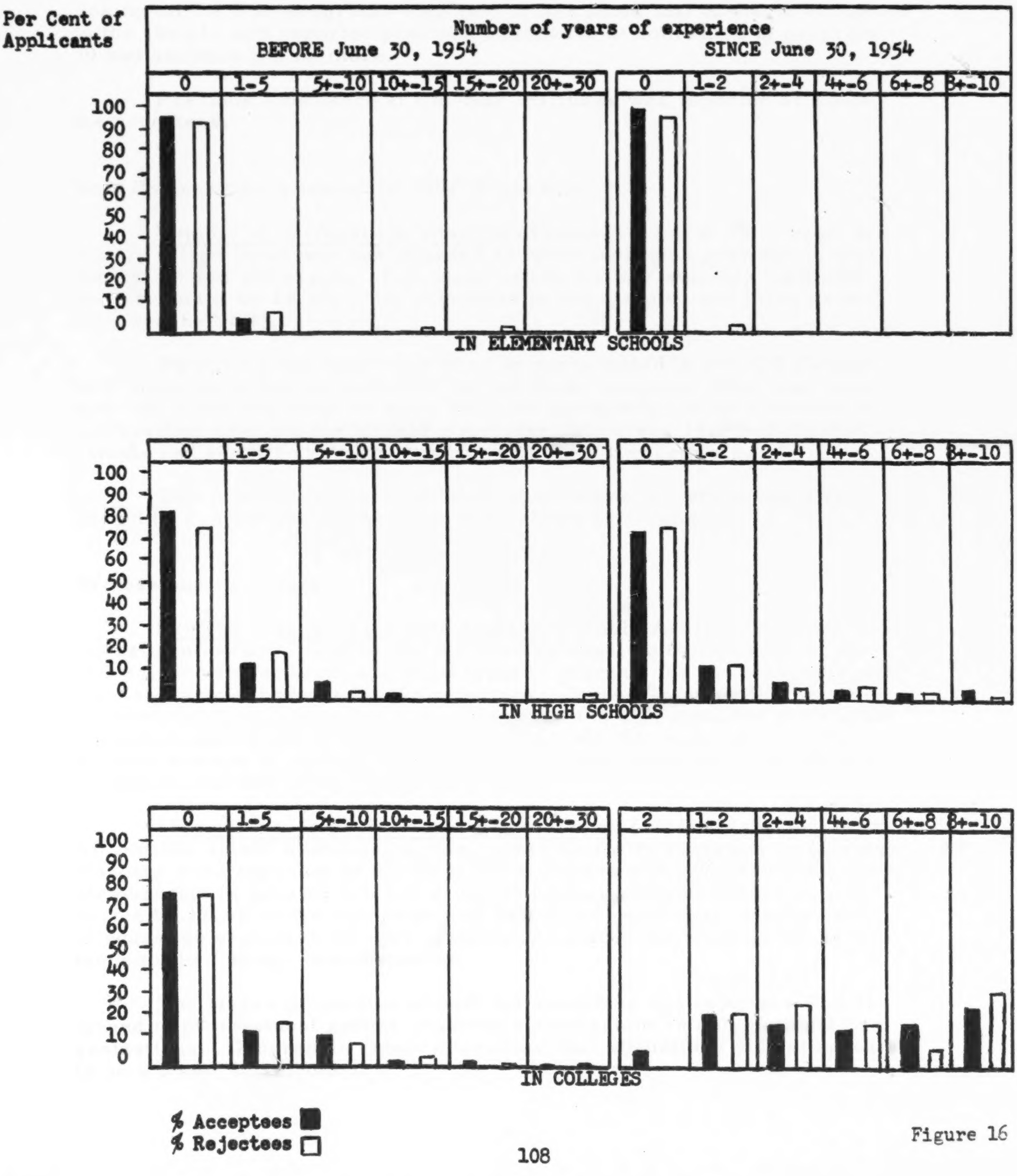

Figure 16

Other NSF programs (Tables A-78 to A-82). Few individuals in the College Low sample of acceptees had taken part in In-Service or Academic Year institutes, or in Research Participation or NSF Fellowship programs. Taking all the NSF programs together, it was noted that of the 52 acceptees in the sample who reported previous attendance at some kind of program, 30 had attended two or more.

Previous attendance at non-NSF institutes was reported by 8% of the acceptees.

Host Universities Attended for NSF Programs

Number of universities attended (Tables A-84 to A-90). Approximately half of those who had attended summer institutes previously, had done so at one university. Two universities for NSF summer institutes were reported by 14.4% of the acceptees in the sample, and three or four universities by 4%.

Except for one individual who had participated in the NSF Fellowship program at two universities, no individual program other than summer institutes was taken at more than one university. With reference to universities attended for all NSF programs, however, 14.4% of the sample had studied at one university, and 8% at two or more.

Two consecutive participations at the same university were reported by 6.4% of the acceptees in the College Low sample.

Professional Interests

Professional journals read regularly (Table A-91). The most typical professional reading matter was reportedly a combination of special science and science-education types of journals for the acceptees, and special science journals for the rejectees. Journal-reading that was exclusively education or science-teaching oriented accounted for 8.8% of the acceptees and 11.2% of the rejectees. Journals that were exclusively general science or special science oriented were reported by 26.4% of the acceptees and 40% of the rejectees.

Membership in professional organizations (Tables A-92 and A-93). Affiliations solely with organizations concerned with education or science-teaching were reported by 36.8% of the acceptees and 32% of the rejectees. Membership in general science or special science organizations was reported by 17.6% of the acceptees and 24% of the rejectees. Membership in education organizations only apparently reduced the chances for acceptance to the College Low institutes.

The larger proportion of both the acceptees and rejectees who belonged to professional groups reported memberships in only national organizations. Geographic extent of professional affiliations did not appear to be a factor in selection.

COLLEGE LOW - SUMMARY OF DIFFERENCES BETWEEN ACCEPTEES AND REJECTEES

The statistically reliable differences that were found between acceptees and rejectees in this sample reflect to a considerable extent the fact that more than half the sample were applicants to engineering institutes. Selection favored those who had been teaching in California (where one of the two low level engineering institutes was located); who had undergraduate credits in physics, mathematics, and engineering, and graduate credits in physics and engineering; who had superior grades in physics and earth science; and who had majored in mathematics or a science for the bachelor's degree.

With respect to employment background, a greater number of acceptees than rejectees had recent professional experience that consisted largely of teaching college level science or mathematics, and had current teaching schedules that emphasized physics. With respect to interests, more among the acceptees than rejectees could be characterized as readers of science-content journals and as members of organizations concerned with science rather than with education.

In sum, the applicant with an educational and professional background in physics or mathematics had a greater probability of being selected to the low level college institutes than did any others.

Chapter 11

SUMMER INSTITUTES FOR COLLEGE TEACHERS

II. Medium Preparation Level

Twenty per cent of the summer institutes for college teachers in 1964 required a moderate amount of preparation in the specified fields. Institutes in mathematics, chemistry, and technical institutes subjects attracted the most applicants (see Table A-1).

The College Medium sample was composed of 250 male and 25 female acceptees, and 241 male and 34 female rejectees.

GENERAL CHARACTERISTICS

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Age	38.0 years		38.3 years	
Marital status	Married	(84.4%)	Married	(77.1%)
No. of dependents	2.4^{+}	3.0^{++}	2.2^{+}	3.0^{++}
No. of dependent's allowances	2.3^{+}	2.8^{++}	2.0^{+}	2.8^{++}
Most undergraduate credits	Math	(21.6 hours)	Math	(21.0 hours)
Most graduate credits	Math	(11.7 hours)	Math	(14.8 hours)
Highest grades				
undergraduate:	Engineering	(3.1)	Education	(3.1)
graduate:	Engineering	(3.4)	Earth science	(3.4)
Highest degree	Bachelor's Master's Doctor's	(16.4%) (70.9%) (10.6%)	Bachelor's Master's Doctor's	(13.5%) (75.6%) (9.1%)

$^{+}$Mean based on total group

$^{++}$Mean for those with non-zero responses

General Characteristics (continued)

Variable	Modal or Mean Responses			
	Acceptees		Rejectees	
Most frequent major				
Bachelor's:	Science or math	(58.8%)	Science or math	(55.6%)
Master's:	Science or math	(50.2%)	Science or math	(52.8%)
(Per cents are of number having the degree)				
Recency of degrees				
Bachelor's:	13.6 years		13.8 years	
Master's:	9.0 years		8.4 years	
Chief teaching emphasis	Mathematics Physics Chemistry	(37.5%) (25.5%) (22.5%)	Mathematics Physics Social science	(47.3%) (18.9%) (11.6%)
Professional experience past 5 years	Teach college sci. and/or math	(67.6%)	Teach college sci. and/or math	(57.5%)
Teaching experience in colleges	3.1 years		2.9 years	
Total enrollment of college where applicant taught	500-999	(28.7%)	1000-2499	(25.8%)
Mean number of institutes attended				
NSF Summer:	0.8[+]	1.6[++]	--	
Total NSF:	0.9[+]	1.7[++]	--	
Professional journals	Special sci. and/or sci.-educ.	(34.2%)	Special sci. and/or sci.-educ.	(36.0%)
Professional affiliations				
Type:	Education and/or sci.-educ.	(39.7%)	Education and/or sci.-educ.	(37.4%)
Geographic extent:	National and regional	(43.6%)	National and regional	(42.9%)

[+] Mean based on total group

[++] Mean for those with non-zero responses

DESCRIPTION AND ANALYSIS OF THE DATA

Location of Schools Where Applicants Taught

State (Tables 21 and A-9). The acceptees and rejectees in this sample were distributed in similar patterns across the country. The only noticeable disparity between the groups, a non-significant one, was in Illinois, which contributed slightly fewer acceptees than might be expected (A's - 3.6%; R's - 6.5%). State where an applicant taught did not appear to have a significant effect on selection.

Region (Tables 21 and A-10). The East and West North Central regions contributed the largest numbers of applicants to the medium level college institutes. The sizes of the accepted and rejected groups from each region were generally similar, and region where the applicant was teaching did not appear to influence selection.

The following chart compares the regional distribution of all U. S. college teachers with those of the acceptees and rejectees to the medium level college institutes in the sample. When noting the disparities between size of applicant group and size of college teacher population, it should be kept in mind that data for the latter group was not limited to science and mathematics teachers.

	Per Cent of All U.S. College Teachers	Per Cent of College Medium Institute's Acceptees	Per Cent of College Medium Institute's Rejectees
New England	7.8	4.0	3.3
Middle Atlantic	20.5	13.5	13.5
East North Central	19.0	17.5	17.8
West North Central	9.3	16.0	16.4
South Atlantic	12.4	11.6	14.2
East South Central	5.2	7.3	5.5
West South Central	8.7	10.2	12.0
Mountain West	3.9	4.0	3.6
Pacific West	13.1	15.6	12.4
Outside U. S.		.4	1.5

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: COLLEGE MEDIUM

(The states of Hawaii and Alaska are in the Pacific division and the West region.)

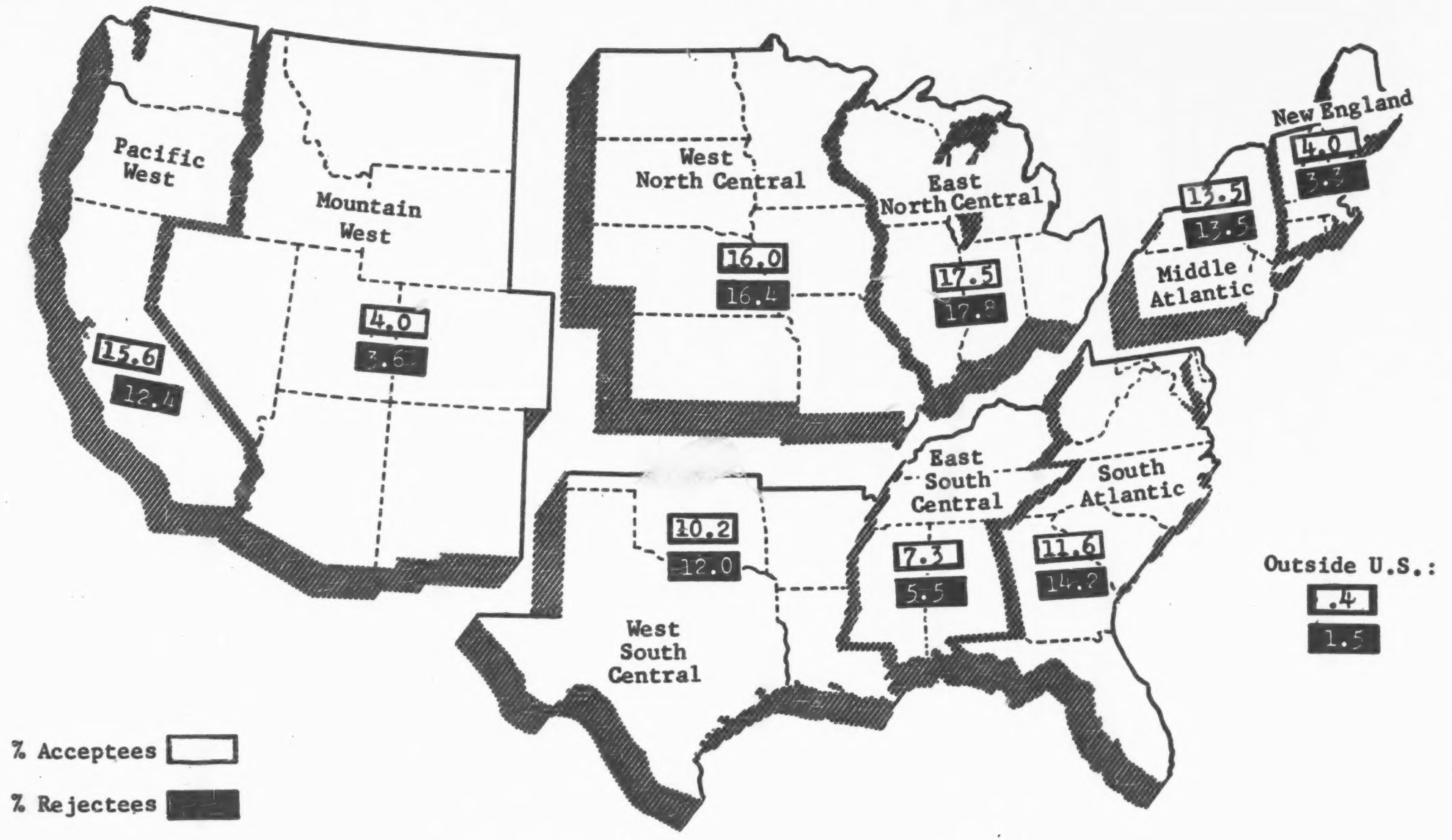
Pacific West
15.6
12.4
Mountain West
4.0
3.6
West North Central
16.0
16.4
East North Central
17.5
17.8
Middle Atlantic
13.5
13.5
New England
4.0
3.3
West South Central
10.2
12.0
East South Central
7.3
5.5
South Atlantic
11.6
14.2
Outside U.S.:
.4
1.5
% Acceptees ☐
% Rejectees ■

Figure 17

Educational Background

Undergraduate semester hours or credits (Tables 22 and A-11 to A-18). The highest average number of undergraduate credits was observed for mathematics (A's - 21.6 hours; R's - 21.0 hours). Education and physics were the next largest categories for both groups. In all subjects except education, acceptees had a slightly higher average number of credits than did the rejectees, but the differences were significant only for chemistry and all science credits together.

Graduate credits (Tables 23 and A-19 to A-26). The highest average number of graduate credits for this sample was in mathematics for both acceptees (11.7 hours) and rejectees (14.8 hours). Graduate credits did not appear to influence selection in this sample, with the possible exception of those in mathematics. A barely significant difference between acceptee and rejectee averages indicated that fewer such credits were to an applicant's advantage.

Grades (Tables 24 and 25, and A-27 to A-40). Mean undergraduate grade-point averages ranged from B- to B+ for both groups. The highest undergraduate grades were in engineering and earth science for the acceptees, and in education and engineering for the rejectees. Although in all cases except education the acceptees had the higher averages, the differences were slight and non-significant.

The graduate grades for this sample were all in the B+ range. The highest grades for the acceptees tended to be in engineering and education, and for the rejectees, in earth science and engineering. Graduate grades did not appear to distinguish significantly between the accepted and rejected applicants.

Major subject for Bachelor's degree (Table A-47). A science or mathematics was the typical undergraduate major among the applicants to the medium level college institutes, but 13% of the acceptees and 17.3% of the rejectees who had the bachelor's degree had majored in a non-science field (other than education). Education in a science or mathematics field was a major that accounted for at least 11% of each group.

Major for the bachelor's degree did not appear to influence selection to these institutes.

Major subject for Master's degree (Table A-48). For the 78.2% of the acceptees and the 83.4% of the rejectees in this sample who had the master's, the most typical graduate major was in a science or mathematics. Education majors were also quite prevalent, accounting for 23.2% of the acceptees and 16.6% of the rejectees who had the master's. Non-science fields other than education accounted for 12.1% of the acceptee majors and for 10% of the rejectee majors.

Major for the master's degree did not noticeably influence selection.

Major subject for the Doctorate (Table A-49). The doctorate was held by 10.2% of the acceptees and 9.5% of the rejectees in the College Medium sample. Science or mathematics was the most typical major for these degrees.

Highest degree earned (Table A-50). "No degree" was reported by 2.2% of the acceptees and by 1.8% of the rejectees in the College Medium sample. All of these were applicants to institutes for technical school teachers.

The bachelor's was the highest degree earned for 16.4% of the acceptees and 13.5% of the rejectees; the master's for 70.9% of the acceptees and 75.6% of the rejectees; and the doctorate for 10.6% of the acceptees and 9.1% of the rejectees. Kind of degree did not appear to distinguish between acceptees and rejectees to the medium level college institutes.

Employment Background

Number of years of experience teaching specific subjects (Tables 27 and A-61 to A-67). Those among the acceptees and rejectees who had teaching experience in the specified fields had more years of experience, on the average, in mathematics (A's - 8.6 years; R's - 8.5 years) and in chemistry (A's - 8 years; R's - 7 years) than in any of the other subjects listed. Amount of teaching experience did not distinguish significantly between acceptees and rejectees.

Professional experience during past five years (Table A-68). Teaching college level science or mathematics had been the predominant professional activity of 67.6% of the acceptees and of 57.5% of the rejectees, and such a background tended to increase the chances for acceptance to the medium level college institutes. The next largest category of professional experience for both groups was teaching science or mathematics at both the high school and college levels (A's - 16.4%; R's - 18.2%). The difference between group sizes for that category was not significant.

Present position (Table A-71). The classification, "professor or instructor" accounted for 89.1% of the acceptees and 93.5% of the rejectees. Most of the remaining applicants were department heads.

Present teaching emphasis (Tables A-75 and A-76). A teaching schedule that emphasized mathematics accounted for 37.5% of the acceptees and 47.3% of the rejectees. Physics and chemistry teaching were also frequent among the acceptees and rejectees, and a sizeable group of rejectees (11.6%) had been teaching a social science. Social science as a current teaching emphasis appeared to decidedly negate the chances of acceptance, while chemistry teaching tended to increase them.

For those in the sample who were teaching more than one subject, mathematics was most frequently the second teaching emphasis.

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

Sample: College Medium

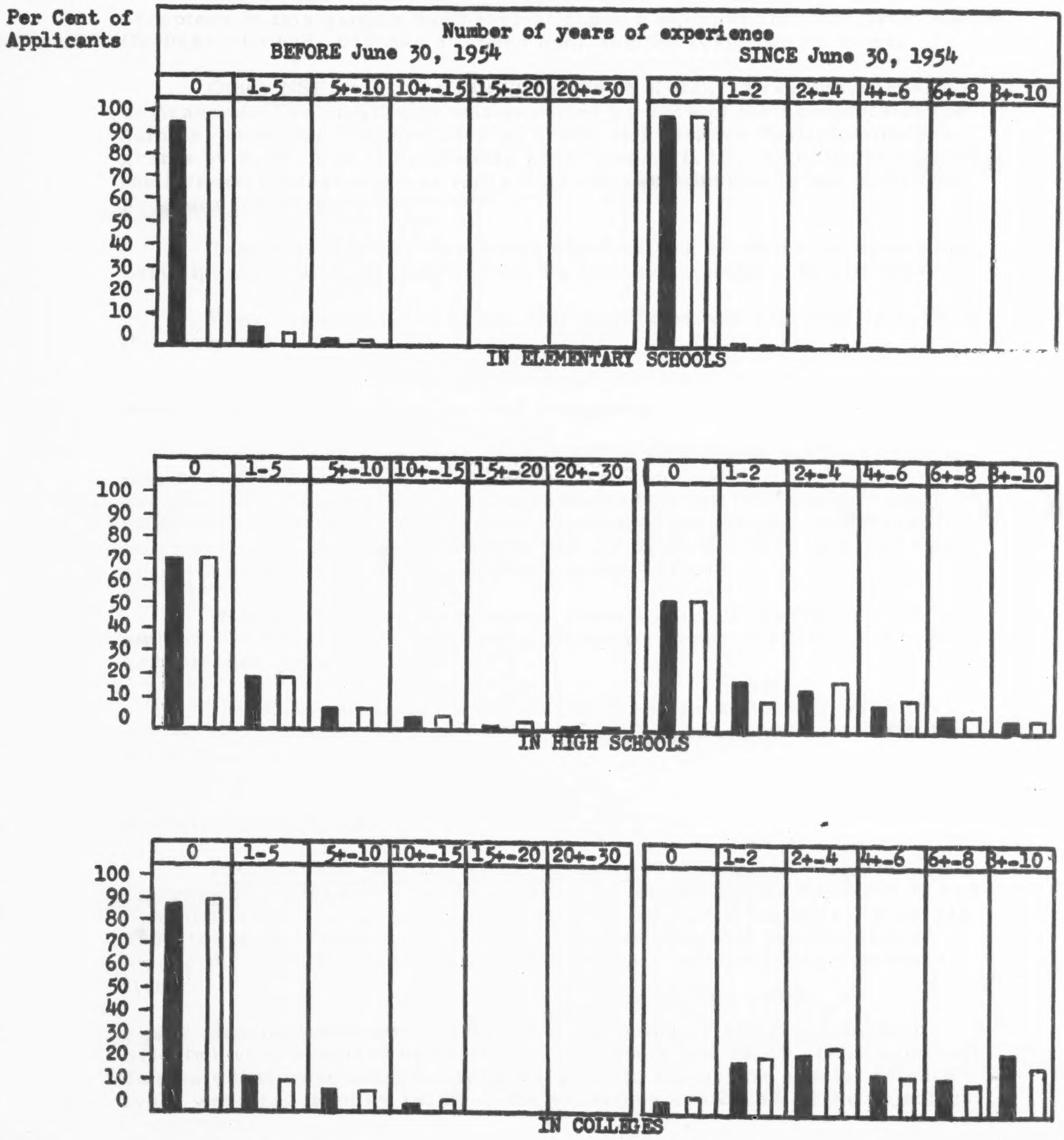

Figure 18

Previous Institute Attendance[+]

NSF Summer Institutes (Table A-77). Approximately 52% of the acceptees in this sample had never attended a summer institute previously. Of those who had, 62% had attended one, and the rest, two or more.

Other NSF programs (Tables A-78 to A-82). Previous attendance at Academic Year institutes was reported by 6.2% of the acceptees in the sample, at In-Service institutes by 2.2%, at Research Participation programs by 2.2%, and at Fellowship programs by 1.8%. Only in the case of the Research programs was more than one participation in any individual program reported.

Taking all the NSF programs together, 53.5% of the acceptees had participated in at least one, and 22.6% had participated in two or more.

Previous attendance at non-NSF institutes was reported by 5.5% of the acceptees.

Host Universities Attended for NSF Programs

Number of universities attended (Tables A-84 to A-90). Approximately two-thirds of those who had attended summer institutes previously had done so at one university. Two universities for NSF summer institutes were reported by 12% of the acceptees in the sample, and three or more by 2.6%. No other individual NSF program had been attended by any acceptee in the sample at more than one university.

With reference to universities attended for all the NSF-sponsored studies, 13.1% of the acceptees had attended two universities, and 4.8% had attended three or more.

Two consecutive participations at the same university were reported by 3.6% of the sample, and three or four consecutive participations by 2.9%.

Professional Interests

Professional journals read regularly (Table A-91). The largest category of professional reading matter for the acceptees appeared to be a combination of special science and science-education journals. Journals reported most frequently by the rejectees were almost equally divided among the special science, science-education, and education classifications.

Journals that were exclusively education or science-education oriented were reported by 28% of the acceptees and 34.2% of the rejectees. Journals that were exclusively of the general science or special science types were reported by 14.9% of the acceptees and 21.4% of the rejectees.

[+] Only acceptees were studied for these items.

Reporting special science journals only appeared to be related in some way to decreasing the chances for acceptance.

Membership in professional organizations (Tables A-92 and A-93). Affiliations solely with organizations concerned with education or science-teaching were reported by 39.7% of the acceptees and 37.4% of the rejectees. Membership only in general science or special science organizations was reported by 15.6% of the acceptees and 14% of the rejectees. Kind of professional affiliation did not distinguish between acceptees and rejectees in this sample.

The larger proportion of both the acceptees and rejectees who belonged to professional groups reported memberships in both regional and national organizations. Geographic extent of professional affiliations did not appear to influence selection.

COLLEGE MEDIUM - SUMMARY OF DIFFERENCES BETWEEN ACCEPTEES AND REJECTEES

The medium level college institutes sample was one of the few groups where personal variables appeared in some way to be related to selection. Significantly more acceptees than rejectees could be described as married, as having dependents, and as requesting dependent's allowances.

Selection to these institutes appeared to favor those with undergraduate credits in the sciences, particularly chemistry, and with graduate credits in mathematics. As with other college samples, recent professional experience that was principally teaching college level science or mathematics, and current teaching schedules that emphasized chemistry were in an applicant's favor.

Chapter 12

SUMMER INSTITUTES FOR COLLEGE TEACHERS

III. High Preparation Level

Fifty per cent of the summer institutes for college teachers required advanced preparation in the specified fields. (Approximately 18% of the college institutes were designed for participants at different stages of preparation. The applicants to these institutes were not studied.)

The high level college institutes sample was composed of 600 acceptees and 600 rejectees. The ratio of male to female applicants, approximately 9 to 1, was about the same in both groups. The courses offered at this level of institute that accounted for the greater proportion of the applicants were mathematics, biology, chemistry, and engineering.

GENERAL CHARACTERISTICS

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Age	37.3 years		37.8 years	
Marital status	Married	(79.5%)	Married	(77.2%)
No. of dependents	2.3^{+}	2.9^{++}	2.3^{+}	3.0^{++}
No. of dependent's allowances	2.2^{+}	2.8^{++}	2.1^{+}	2.9^{++}
Most undergraduate credits	Math	(18.8 hours)	Math	(18.2 hours)
Most graduate credits	Chemistry	(10.1 hours)	Math	(10.2 hours)
Highest grades				
undergraduate:	Engineering	(3.2)	Engineering	(3.1)
graduate:	Engineering	(3.5)	Education	(3.3)

$^{+}$Mean based on total group

$^{++}$Mean for those with non-zero responses

General Characteristics (continued)

	Modal or Mean Responses			
Variable	Acceptees		Rejectees	
Highest degree	Bachelor's Master's Doctor's	(6.2%) (58.3%) (35.3%)	Bachelor's Master's Doctor's	(13.4%) (69.2%) (17.0%)
Most frequent major				
Bachelor's:	Science or math	(80.6%)	Science or math	(71.6%)
Master's:	Science or math	(81.3%)	Science or math	(64.6%)
(Per cents are of number having the degree)				
Recency of degrees				
Bachelor's:	13.7 years		13.5 years	
Master's:	9.1 years		9.0 years	
Chief teaching emphasis	Physics Chemistry Math	(26.7%) (23.2%) (18.7%)	Mathematics Biology Physics	(31.2%) (20.0%) (18.0%)
Professional experience past 5 years	Teach college sci. and/or math	(76.8%)	Teach college sci. and/or math	(71.2%)
Teaching experience in colleges	3.3 years		3.0 years	
Total enrollment of college where applicant taught	1000-2499	(22.8%)	1000-2499	(26.5%)
Mean number of institutes attended				
NSF Summer:	0.6^{+}	1.6^{++}	--	
Total NSF:	0.9^{+}	1.9^{++}	--	
Professional journals	Science-educ. and/or special science	(37.8%)	General sci. and/or special science	(41.6%)

$^{+}$Mean based on total group

$^{++}$Mean for those with non-zero responses

General Characteristics (continued)

Variable	Modal or Mean Responses Acceptees	 Rejectees
Professional affiliations		
Type:	Gen. sci. and/or special sci. (31.5%)	Gen. sci. and/or special sci. (25.8%)
Geographic extent:	National orgs. only (42.7%)	National and regional (44.8%)

DESCRIPTION AND ANALYSIS OF THE DATA

Location of Schools Where Applicants Taught

State (Tables 21 and A-9). The acceptee and rejectee distributions across the country were quite similar. A higher ratio of acceptees to rejectees was noticeable for New York and Ohio, and a lower ratio for California and Florida. The differences in selection was significant only for Florida.

Region (Tables 21 and A-10). The East North Central region contributed the largest group of applicants to the high level college institutes, and territories outside the U. S. least. There were also relatively few from the New England states. An applicant from the Pacific West was at a disadvantage but other than this instance, region of residence did not distinguish between acceptees and rejectees.

The following chart compares the regional distribution of the U. S. college teacher population with those of the acceptees and rejectees to the high level college institutes. It may be observed that the distributions are fairly similar except in the case of the Middle Atlantic region, which contributed fewer applicants in proportion to its college teacher population, than did the other regions.

	Per Cent of All U.S. College Teachers	Per Cent of College High Institute's Acceptees	Per Cent of College High Institute's Rejectees
New England	7.8	5.3	3.7
Middle Atlantic	20.5	16.2	12.8
East North Central	19.0	19.2	16.7
West North Central	9.3	12.7	10.0
South Atlantic	12.4	12.8	15.7
East South Central	5.2	5.2	6.5
West South Central	8.7	8.8	10.8
Mountain West	3.9	6.0	4.7
Pacific West	13.1	10.8	14.8
Outside U. S.		3.0	4.3

Educational Background

Undergraduate semester hours or credits (Tables 22 and A-11 to A-18). The average number of undergraduate credits was largest in mathematics for both acceptees (18.8 hours) and rejectees (18.2 hours). Chemistry, biology, and physics, in that order, were the next largest categories. Undergraduate credits distinguished between acceptees and rejectees in three cases: credits in chemistry specifically, and in all sciences generally, were in an applicant's favor, but credits in education were not.

Graduate credits (Tables 23 and A-19 to A-26). The largest average number of graduate credits was in chemistry for the acceptees (10.1 hours) and in mathematics for the rejectees (10.2 hours). A greater number of credits in chemistry and physics specifically, and in all sciences generally, distinguished acceptees from rejectees.

Grades (Tables 24 and 25, and A-27 to A-40). The undergraduate mean grade-point averages for each group ranged from B- to B+, and the graduate, from B to B+. Acceptees had higher average grades than rejectees in all subjects. On the undergraduate level these differences were significant for biology, chemistry, mathematics, and education. On the graduate level, the differences were significant for biology, chemistry, and earth science.

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: COLLEGE HIGH

(The states of Hawaii and Alaska are in the Pacific division and the West region.)

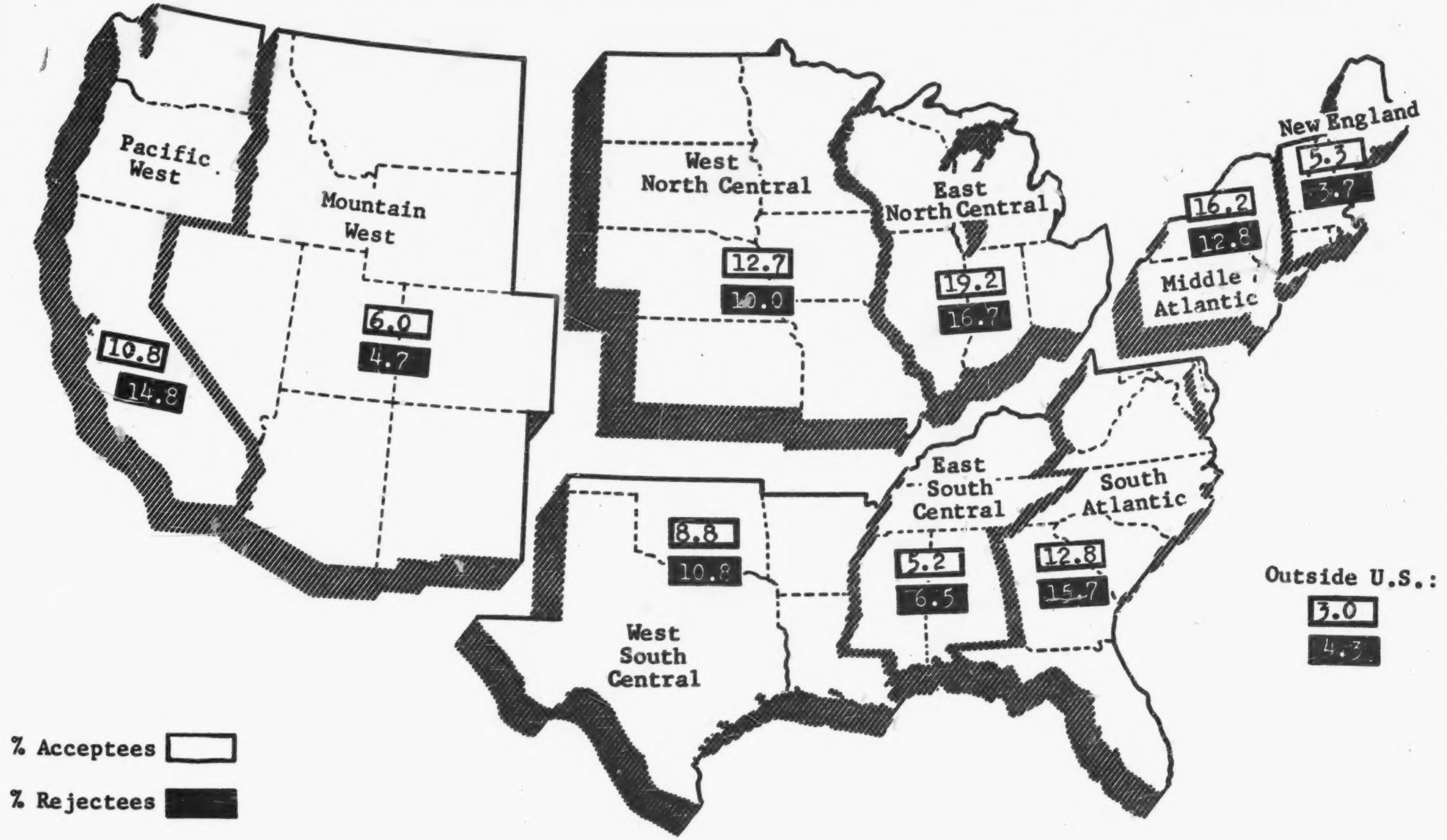
Pacific West
10.8
14.8
Mountain West
6.0
4.7
West North Central
12.7
10.0
East North Central
19.2
16.7
New England
5.3
3.7
Middle Atlantic
16.2
12.8
West South Central
8.8
10.8
East South Central
5.2
6.5
South Atlantic
12.8
15.7
Outside U.S.:
3.0
4.3
% Acceptees
% Rejectees

Figure 19

Major subject for Bachelor's degree (Table A-47). Major for the bachelor's degree was most typically a science or mathematics. About 11% of the acceptees and 10% of the rejectees had majored in a field that was neither science, mathematics, or education. Mathematics or science majors were to an applicant's advantage.

Major subject for Master's degree (Table A-48). For the 86.5% of acceptees and 83.3% of rejectees in this sample who had the master's degree, science or mathematics was again the most typical major, and that kind of major was again in the applicant's favor, in contrast to an education major which reduced the probability of acceptance.

Major subject for the Doctorate (Table A-49). Most of the 35.3% of acceptees and 17% of rejectees who had the doctorate had earned it in a science and mathematics field.

Highest degree earned (Table A-50). Only one acceptee and 3 rejectees in the sample reported having no degree. The master's was usually the highest degree earned, accounting for 58.3% of the acceptees and 69.2% of the rejectees. The doctorate was held by twice as many acceptees (35.3% of the group) as rejectees (17%), and was distinctly in an applicant's favor.

Employment Background

Number of years of experience teaching specific subjects (Tables 27 and A-61 to A-67). Looking at both the whole-group data and the data for just those with experience in a specified field, the acceptees had more years of teaching experience, on the average, in chemistry than in any other subject, and the rejectees had more experience teaching mathematics than any other subject. For those with the relevant teaching experience, the average numbers of years ranged from 4.1 years (acceptees) and 4.5 years (rejectees) in general science, to 8.1 years in chemistry (acceptees) and 7 years in mathematics (rejectees).

Teaching experience in mathematics or in general science tended to discriminate against the applicant, but it should be noted that sizeable numbers with this kind of experience were accepted.

Professional experience during past five years (Table A-68). Approximately 77% of the applicants to the high level college institutes had been teaching a science or mathematics at the college level during the five years preceding application and this background was generally favored in selection. Teaching science or mathematics in a combined high school and college accounted for 10% of the acceptees and 13.2% of the rejectees.

Present position (Table A-71). Approximately 90% of the accepted and rejected groups were classified as instructors or professors. The next largest category was "department head," which included 7.5% of the acceptees and 6.5% of the rejectees.

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

Sample: College High

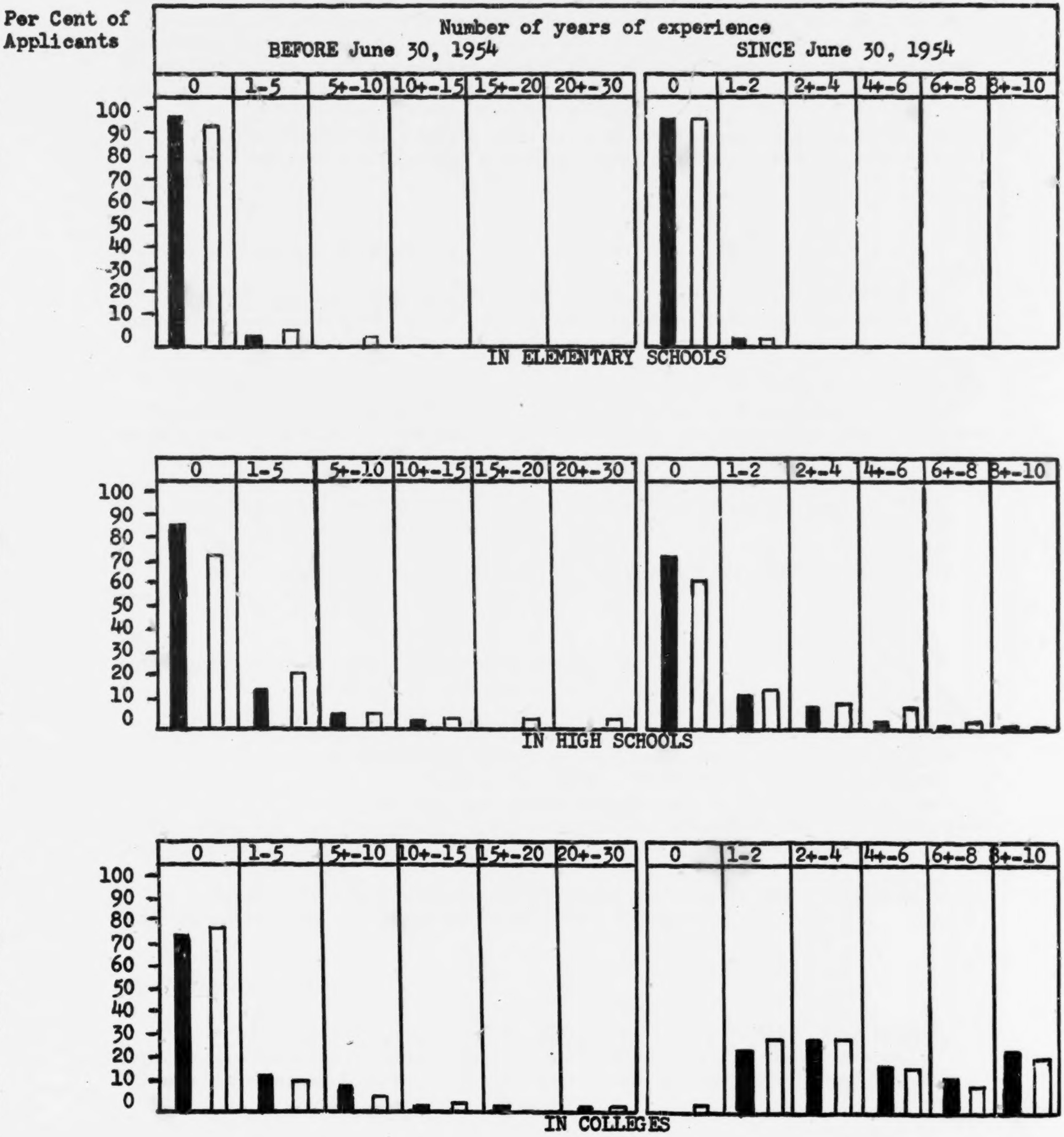

Figure 20

Present teaching emphasis (Tables A-75 and A-76). Teaching at the college level usually involves one field. The subjects most typically taught by the acceptees were physics or chemistry, and by the rejectees were mathematics or biology. Those who reported teaching primarily chemistry or physics increased their chances of acceptance, but a mathematics chief teaching emphasis decreased these chances.

For those in the sample who were teaching more than one subject, the second subject was usually either general science, physics, or mathematics.

Previous Institute Attendance+

NSF Summer Institutes (Table A-77). Approximately 60% of the acceptees had never attended a summer institute, 24% had studied at one, and 16.3% had studied at two or more.

Other NSF programs (Tables A-78 to A-82). Few college institute acceptees had attended In-Service institutes; 5.3% had attended one Academic Year institute; 6.8% had been involved in the Research Participation programs, and 4% in NSF Fellowship programs. Slightly less than half of the acceptees had participated in NSF programs previously. Of those who had, half reported one participation, and the rest reported two or three previous NSF participations.

Attendance at non-NSF institutes was noted for 8.8% of the acceptees.

Host Universities Attended for NSF Programs

Number of universities attended (Tables A-84 to A-90). Approximately half of those with previous summer institutes had them at one university. Two universities for summer institutes were reported by 9.3% of the sample and three universities by 4.5%. Few individuals had attended more than one university for any other single type of NSF program, but with respect to all the NSF programs together, 11.7% of the acceptees had attended two universities, and 7.5% had attended three or more.

Consecutive attendances at the same university for more than one NSF program was reported by 8.2% of the acceptees.

Professional Interests

Professional journals read regularly (Table A-91). The most typical journal classification for the acceptees was the combination, "General Science, Special Science, and Science-education", and for the

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+Only acceptees were studied for these items.

rejectees was "Special Science only". Combinations of science-oriented journals seemed to be related to acceptance, but reporting only special science journals seemed to be related to rejection.

Membership in professional organizations (Tables A-92 and A-93). The larger proportion of the high level college institute applicants were members either of special science organizations only, or of a number of organizations that included special science. Almost any combination of memberships that included education organizations seemed to decrease the probability of acceptance, whereas almost any combination that included special science increased the probability of acceptance.

The greater proportion of both the accepted and rejected groups who had any professional affiliations belonged to both regional and national organizations.

HIGH LEVEL COLLEGE INSTITUTES - SUMMARY OF DIFFERENCES BETWEEN ACCEPTEES AND REJECTEES

Educational background variables appeared to influence selection to some extent. Both undergraduate and graduate credits in the sciences, especially chemistry, was advantageous, while credits in education were not, and the better the performance in biology and chemistry, the more probable was acceptance. The doctorate was the preferred degree in selection, and science or mathematics was the preferred major for the Bachelor's and Master's degrees.

Professional background variables also appeared to influence selection somewhat. Applicants had the advantage if they had been teaching at a university rather than at a junior college; if they were from an educational institution whose enrollment was 2500 or more; if their professional experifor the past five years was predominantly teaching science or mathematics at the college level; and if they were teaching chemistry or physics at the time of application.

Professional interests that revolved around reading journals with scientific content and being affiliated with organizations that were science- rather than education-oriented, appeared to increase the chances of acceptance.

Chapter 13

MALE AND FEMALE APPLICANTS

A study was made of the male and female applicants in the medium level secondary unitary institutes' sample. Among the males were 406 acceptees and 425 rejectees, and among the females, 119 acceptees and 100 rejectees. The kinds of institutes accounting for the largest number of applicants in both the male and female groups were mathematics, multiple fields, and biology.

GENERAL CHARACTERISTICS

Acceptees

	Modal or Mean Responses			
Variable	Male		Female	
Age	34.7 years		36.6 years	
Marital status	Married	(85.0%)	Single	(53.8%)
No. of dependents	2.4[+]	3.0[++]	0.7[+]	2.0[++]
No. of dependent's allowances	2.3[+]	2.9[++]	0.6[+]	1.8[++]
Most undergraduate credits	Education	(18.5 hours)	Education	(22.8 hours)
Most graduate credits	Education	(11.2 hours)	Education	(6.9 hours)
Highest grades undergraduate:	Education	(3.0)	Education	(3.1)
graduate:	Education	(3.2)	Mathematics	(3.2)
Highest degree	Bachelor's	(59.3%)	Bachelor's	(68.1%)
	Master's	(40.4%)	Master's	(31.9%)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

Acceptees

Modal or Mean Responses

Variable	Male		Female	
Most frequent major				
Bachelor's:	Science or math	(49.9%)	Science or math	(56.3%)
Master's	Education	(57.9%)	Science or math	(45.9%)
(Per cents are of number having the degree)				
Recency of degrees				
Bachelor's:	10.0 years		12.1 years	
Master's:	7.0 years		12.2 years	
Chief teaching emphasis	Mathematics	(40.6%)	Mathematics	(50.4%)
	Biology	(22.2%)	Biology	(25.2%)
	Chemistry	(13.8%)	Chemistry	(8.4%)
Professional experience past 5 years	Teach secondary sci. and/or math	(87.4%)	Teach secondary sci. and/or math	(73.1%)
Teaching experience in secondary schools	3.5 years		4.6 years	
Total enrollment of school where applicant taught	1000-2499	(38.2%)	1000-2499	(40.3%)
Mean number of institutes attended				
NSF Summer:	0.7[+]	1.6[++]	0.5[+]	1.5[+]
Total NSF:	1.0[+]	1.8[++]	0.8[+]	1.8[++]
Professional journals	Education and/or sci.-educ.	(31.5%)	Education and/or sci.-educ.	(40.3%)
Professional affiliations				
Type:	Education and/or sci.-educ.	(72.5%)	Education and/or sci.-educ.	(73.9%)
Geographic extent:	National and regional	(68.2%)	National and regional	(68.9%)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

Acceptees

Modal or Mean Responses

Variable	Male		Female	
Certification status	Permanent secondary	(86.7%)	Permanent secondary	(80.7%)
Certification deficiency	Science or math	(4.7%)	Science or math	(5.0%)

GENERAL CHARACTERISTICS

Rejectees

Modal or Mean Responses

Variable	Male		Female	
Age	33.5 years		35.3 years	
Marital status	Married	(80.9%)	Single	(62.0%)
No. of dependents	2.2[+]	2.8[++]	0.7[+]	2.0[++]
No. of dependent's allowances	2.1[+]	2.7[++]	0.6[+]	2.0[++]
Most undergraduate credits	Education	(19.7 hours)	Education	(22.2 hours)
Most graduate credits	Education	(8.1 hours)	Education	(5.3 hours)
Highest grades undergraduate:	Education	(2.8)	Education	(3.2)
graduate:	Education	(3.1)	Education	(3.1)
Highest degree	Bachelor's	(66.6%)	Bachelor's	(73.0%)
	Master's	(32.0%)	Master's	(26.0%)

[+] Mean based on total group

[++] Mean for those with non-zero responses

General Characteristics (continued)

Rejectees

Modal or Mean Responses

Variable	Male	Female
Most frequent major		
Bachelor's:	Science or math (44.6%)	Science or math (52.5%)
Master's	Education (52.6%)	Science or math (57.7%)
(Per cents are of number having the degree)		
Recency of degrees		
Bachelor's:	9.0 years	10.7 years
Master's:	8.4 years	9.2 years
Chief teaching emphasis	Mathematics (44.7%)	Mathematics (51.0%)
	General science (15.5%)	Biology (20.0%)
	Biology (13.2%)	General science (12.0%)
Professional experience past 5 years	Secondary sci. and/or math (73.9%)	Secondary sci. and/or math (66.0%)
Teaching experience in secondary schools	3.2 years	4.0 years
Total enrollment of school where applicant taught	1000-2499 (33.9%)	500-999 (33.0%)
Professional journals	Education, gen. sci., and/or sci.-educ. (77.5%)	Education, gen. sci., and/or sci.-educ. (83.0%)
Professional affiliations		
Type:	Education and/or sci.-educ. (74.8%)	Education and/or sci.-educ. (75.0%)
Geographic extent:	National and regional (57.2%)	National and regional (70.0%)
Certification status	Permanent secondary (77.9%)	Permanent secondary (78.0%)
Certification deficiency	Science or math (9.4%)	Science or math (8.0%)

DESCRIPTION AND ANALYSIS OF THE DATA

Personal Variables

Within the male group, number of allowance requests was the only personal variable that distinguished between acceptees and rejectees. The acceptees had the higher average number of requests.

Personal attributes did not distinguish between female acceptees and rejectees, and only one, marital status, did between the male and female groups. A significantly larger proportion of the male acceptees than of the female acceptees was married.

Location of Schools Where Applicants Taught

City (Table A-8). Size of city did not distinguish between acceptees and rejectees in either the male or female group. However, more female applicants (21.6%) than male (14.0%) had been living in communities with populations larger than 250,000.

State (Tables 21 and A-9). State did not distinguish between acceptees and rejectees in the male group but may have in the female group. The numbers involved were too small to make the following observations statistically reliable: a higher ratio of female acceptees to rejectees was observed in New York, Missouri, and Colorado, and a lower ratio in Pennsylvania, Wisconsin, and Louisiana.

No significant differences between male and female distributions across the states was observed, but the apparent differences consisted of higher percentages of male than of female acceptees from Ohio, Indiana, Illinois, Wisconsin, Minnesota, and California, and higher percentages of female than of male acceptees from New Jersey, Missouri, Virginia, Alabama, and Texas.

Region (Tables 21 and A-10). Region where the applicant taught generally did not seem to affect selection within the male and female groups. An exception was that males from the West South Central region were less likely to be selected than might be expected by chance.

The following chart compares the regional distributions of male and female acceptees and rejectees with that of all U. S. secondary school science and mathematics teachers. Some apparent (non-significant) differences may be noted. There appear to be fewer female applicants than might be expected from the New England, West North Central and Pacific West regions, and more than might be expected from the South Atlantic and West South Central regions. Fewer male applicants than might be predicted were from the South Atlantic region, but otherwise the male applicants were distributed very much like the population of U. S. secondary science teachers.

Region	Estimated Percentage of All U.S. Secondary Science and Mathematics Teachers	Per Cent of Secondary Unitary Medium Institute's Acceptees		Per Cent of Secondary Unitary Medium Institute's Rejectees	
		M	F	M	F
New England	6.48	5.7	3.4	5.9	3.0
Middle Atlantic	16.04	15.8	17.6	15.3	18.0
East North Central	18.00	21.4	13.4	18.1	19.0
West North Central	10.14	10.8	8.4	10.4	7.0
South Atlantic	15.34	12.8	19.3	11.8	18.0
East South Central	7.50	4.7	9.2	5.9	8.0
West South Central	12.21	9.9	17.6	15.8	21.0
Mountain West	4.63	5.2	5.0	5.6	1.0
Pacific West	9.64	11.8	4.2	9.9	4.0
Outside U. S.		2.0	1.7	1.4	1.0

Educational Background

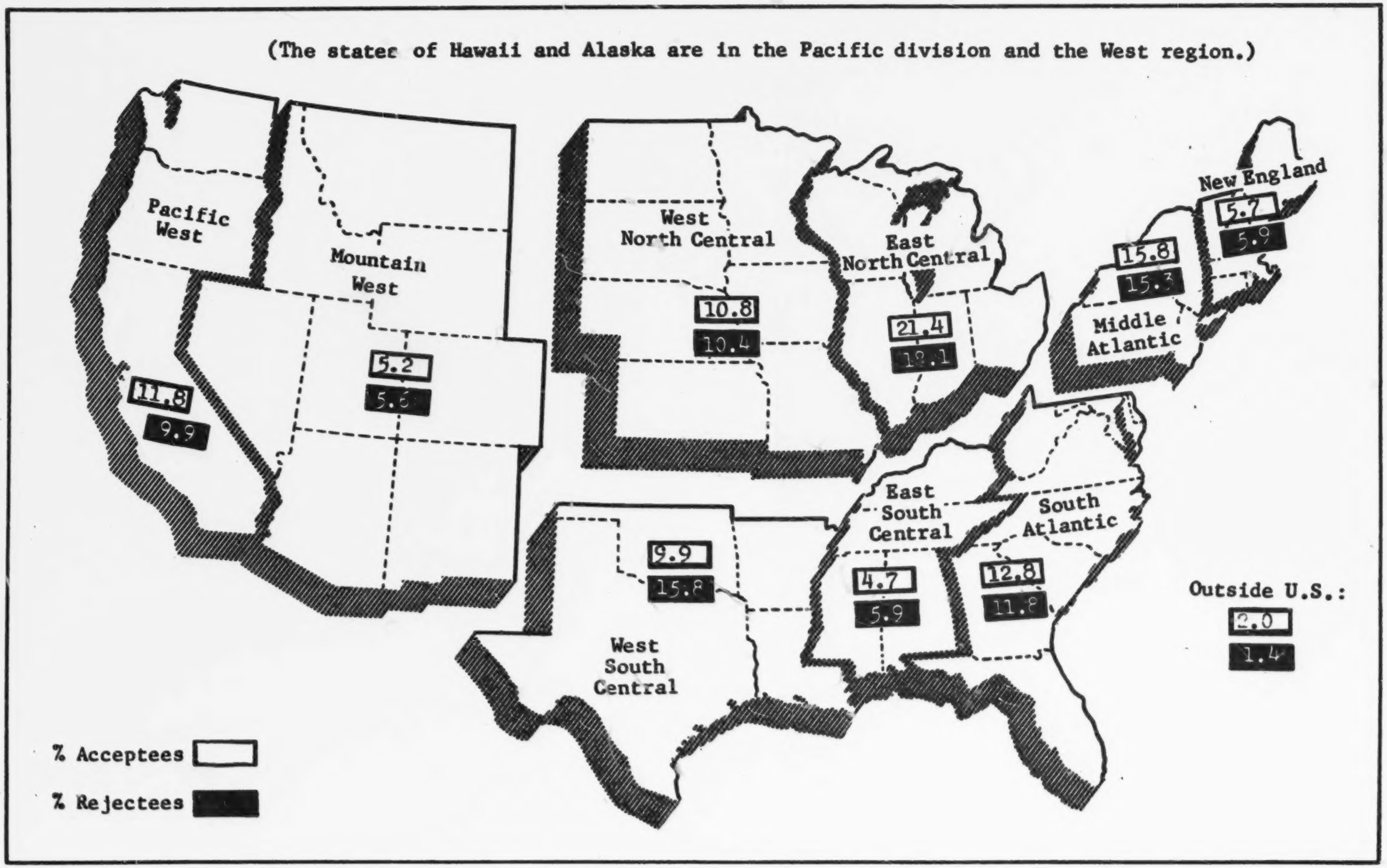
Undergraduate and graduate credits (Tables 22, 23, and A-11 to A-26). The highest average number of undergraduate and graduate credits for all groups was in education. Mathematics or biology was the next largest category for all groups.

Male acceptees as a group had significantly more credits than male rejectees in undergraduate biology, chemistry, physics, and all sciences together; and in graduate biology, education, and all sciences together. Male rejectees had significantly more credits in undergraduate earth science. There were no significant differences in number of credits between female acceptees and rejectees, nor was there a consistent trend apparent for either group to have more credits than the other.

When male and female acceptees are compared, it can be noted that the male group had significantly more undergraduate credits than did the female in chemistry, physics, earth science, and all sciences together, and more graduate credits in earth science and education.

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: MALE



(The states of Hawaii and Alaska are in the Pacific division and the West region.)

Pacific West
11.8
9.9
Mountain West
5.2
5.6
West North Central
10.8
10.4
East North Central
21.4
18.1
Middle Atlantic
15.8
15.3
New England
5.7
5.9
West South Central
9.9
15.8
East South Central
4.7
5.9
South Atlantic
12.8
11.8
Outside U.S.:
2.0
1.4
% Acceptees ☐
% Rejectees ■

Figure 21

PERCENTAGE OF ACCEPTEES AND REJECTEES FROM EACH DIVISION OF THE U.S. CENSUS REGIONS

Sample: FEMALE

(The states of Hawaii and Alaska are in the Pacific division and the West region.)

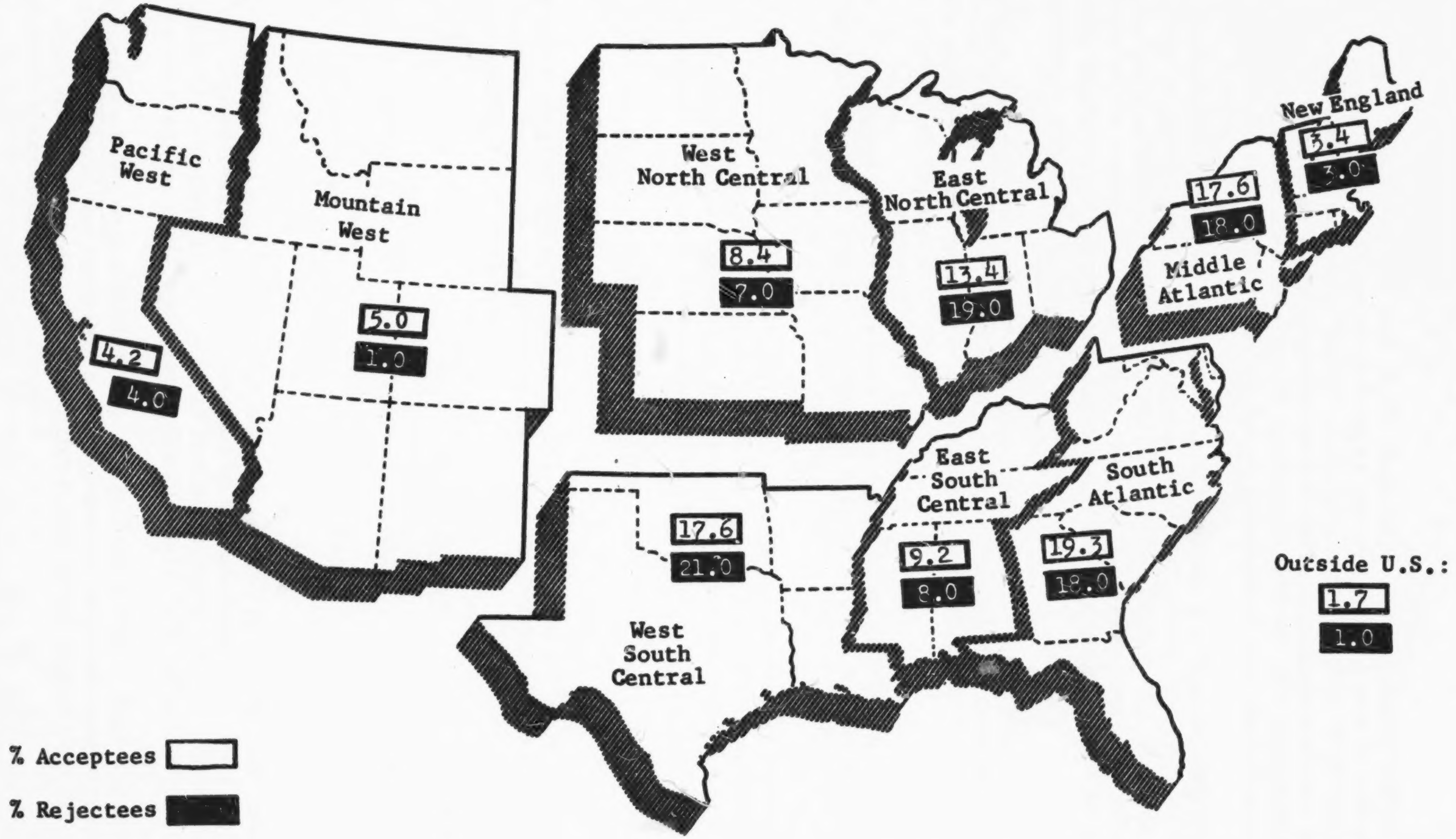

Pacific West
4.2
4.0
Mountain West
5.0
1.0
West North Central
8.4
7.0
East North Central
13.4
19.0
Middle Atlantic
17.6
18.0
New England
3.4
3.0
West South Central
17.6
21.0
East South Central
9.2
8.0
South Atlantic
19.3
18.0
Outside U.S.:
1.7
1.0
% Acceptees ☐
% Rejectees ■

Figure 22

Grades (Tables 24, 25, and A-27 to A-40). The highest undergraduate and graduate grade-point averages for all groups was in education. Male acceptees had consistently higher undergraduate grades than male rejectees. The differences were significant for biology, mathematics, and education. Graduate grades also were usually higher for the acceptees among the males, and significantly so for mathematics and education.

The female acceptees had higher grades than the female rejectees in most of the undergraduate and graduate courses listed, but none of the differences were statistically significant. However, when the male and female groups were compared, the female acceptees were observed to have significantly higher undergraduate grades than the male acceptees in biology, chemistry, mathematics, and education.

Major subject for degrees (Tables A-47 and A-48). Science or mathematics was the most typical undergraduate major for both the male and female groups in this sample. Education in a science or mathematics field was next most popular.

Major for the master's degree was more often in education than in any other subject for the males, and more often in science or mathematics than in any other subject for the females.

Major for degrees did not distinguish between female acceptees and rejectees, but did among the males, where a science or mathematics major for the bachelor's degree appeared to increase the chances of selection and an education major decreased them.

Major for degrees did not discriminate between male and female applicants.

Highest degree earned (Table A-50). The bachelor's degree was most frequently the highest degree earned, but the master's was held by sizeable percentages of each group:

	% Acceptees	% Rejectees
Male	40.4	32.0
Female	31.9	26.0

In both the male and female groups it would appear that the master's as the highest degree was preferred to the bachelor's. This finding was statistically reliable in the case of the male applicants. In addition, a higher percentage of male applicants than female had the master's.

Recency of degrees (Tables 26, A-51, and A-52). The female applicants had held both the bachelor's and master's degrees longer, on the average, than had the males. These differences were significant for the male and female acceptees:

	Male Acceptees	Female Rejectees
Bachelor's	10.0 years	12.1 years
Master's	7.0 years	12.2 years

Employment Background

Number of years of experience teaching specific subjects (Tables 27 and A-61 to A-67). Disregarding the category "other subjects", which indicates the non-science, non-mathematics subjects, the highest average number of years of teaching experience was seen to be in mathematics for all groups. Chemistry was next highest in years of teaching experience for all except female rejectees, for whom physics was second.

Teaching experience did not distinguish between acceptees and rejectees in either the male or female group, with the exception that female rejectees had more experience teaching general science than did female acceptees.

Both acceptees and rejectees in the female group had significantly more teaching experience, on the average, in mathematics than did their counterparts in the male group. Other than this and some scattered differences between male and female rejectees, teaching experience did not seem to distinguish the male from the female applicants.

Teacher certification (Tables A-69 and A-70). Most of each group was fully accredited at the secondary school level. The small number in each group who reported certification deficiencies usually indicated them in science or mathematics.

In the male group, permanent certification appeared to be preferred over provisional credentials, and, along with that, a certification deficiency in science and mathematics reduced the chances for acceptance. If the certification variable influenced selection among the femals applicants, it was not apparent, possibly because of the small numbers involved.

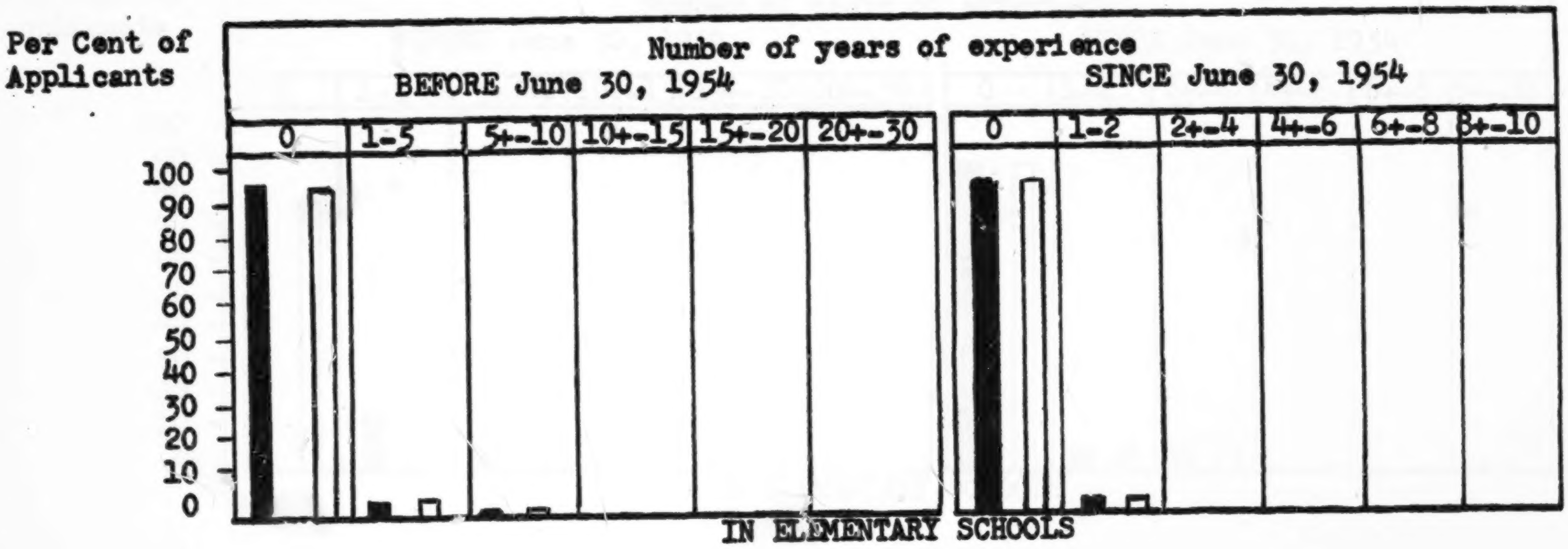
Present position (Table A-71). Close to 90% of each group were classified as teachers. The category "department heads" accounted for most of the remaining applicants. Current position did not appear to influence selection in or between the male and female groups.

Teaching emphasis (Tables A-75 and A-76). The current weekly teaching schedules of both the male and female groups emphasized mathematics more frequently than any other subject. Biology, general science, and chemistry were the next most frequent chief teaching emphases.

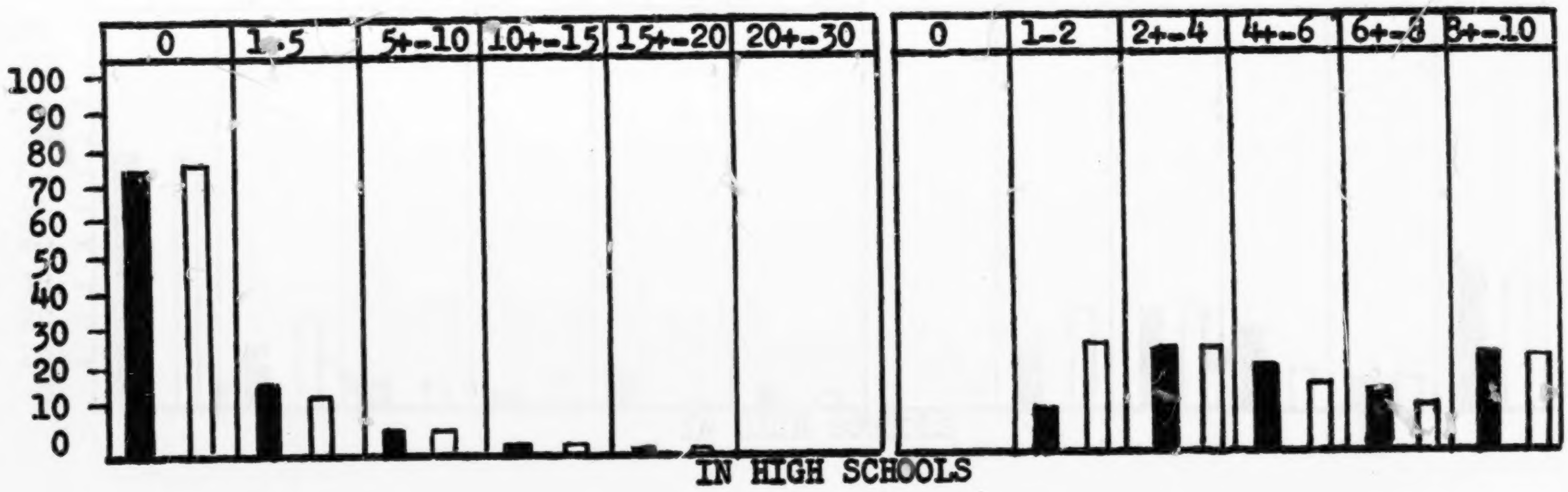
The teaching emphasis variable distinguished significantly between acceptees and rejectees only among the males, where a schedule that emphasized biology was advantageous, and one that emphasized general science was not. No reliable difference was found between males and

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

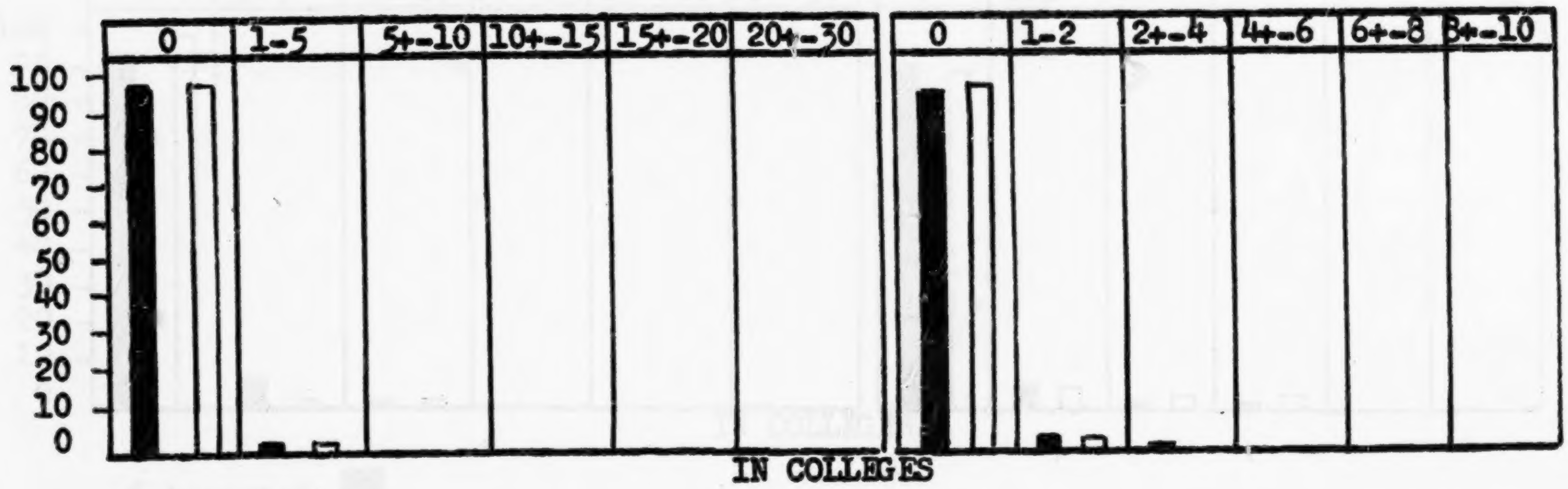
Sample: Male



IN ELEMENTARY SCHOOLS



IN HIGH SCHOOLS



IN COLLEGES

% Acceptees ■
% Rejectees □

Figure 23

AMOUNT AND RECENCY OF TEACHING EXPERIENCE IN ELEMENTARY SCHOOLS, HIGH SCHOOLS, AND COLLEGES

Sample: Female

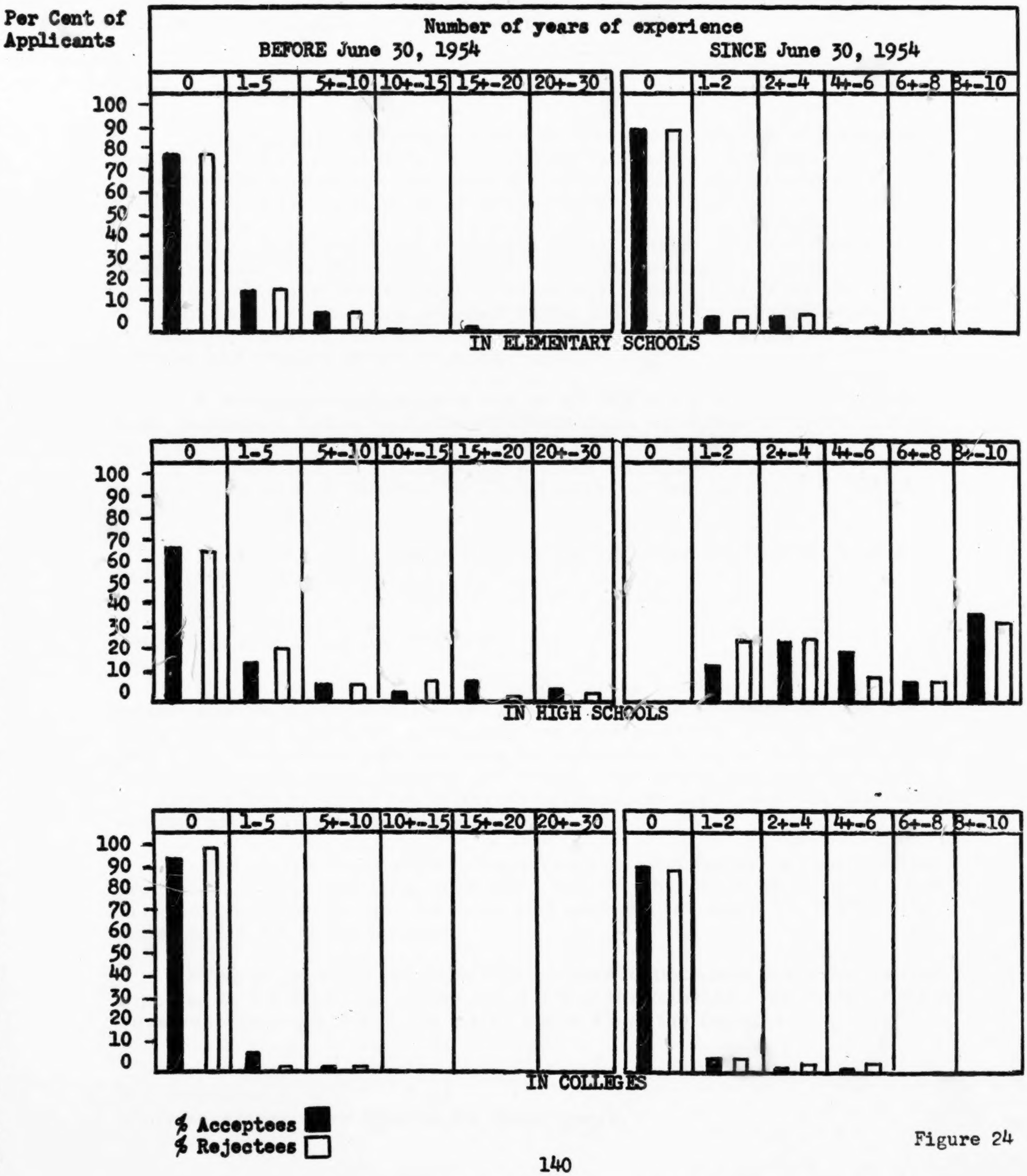


Figure 24

females on this variable with the exception that a higher percentage of females than of males were mathematics teachers.

Institute Attendance[+]

NSF Summer Institutes (Table A-77). Attendance at at least one summer institute previously was reported by 43.6% of the male and 31.9% of the female acceptees. Attendance at two or more was reported by 18.0% of the males and 10.0% of the females.

Other NSF programs (Tables A-78 to A-82). The In-Service institutes program was the only one other than the Summer Institutes to have drawn sizeable numbers of applicants in this sample. Eighteen per cent of the male and twenty-one per cent of the female acceptees had studied at at least one In-Service institute, and 5.4% of the males and 4.2% of the females had studied at two or more.

Previous participation in any or all NSF programs, whether Summer, Academic Year, or In-Service institutes, or Research Participation or Fellowship programs, was reported by 53.0% of the male acceptees and by 42.9% of the female acceptees. Participation in two or more of these programs was reported by 27.7% of the males and 24.3% of the females.

Non-NSF institute participation was noted for 8.4% of the males and 10.9% of the females.

Universities Attended for NSF Institutes

Number of universities attended (Tables A-84 to A-90). Approximately one-third of the males and one-fourth of the females who had attended summer institutes previously had done so at two or more universities. The In-Service program was the only other to account for attendance at more than one university per individual. Six males and one female in the sample had attended two different universities for In-Service institutes, and one male had attended three.

With respect to number of universities attended for any or all NSF programs, two universities each were reported by 12.6% of the males and 11.8% of the females, and three or four universities each, by 7.2% of the males and 5.8% of the females.

Two or more consecutive attendances at the same university were reported by 11.8% of the males and 7.6% of the females, and three or more were reported by 2.6% of the males and 0.8% of the females.

[+] Only acceptees were studied for these items.

Professional Interests

Professional journals read regularly (Table A-91). Types of journals read did not distinguish between acceptees and rejectees either within or between the male and female groups.

Journals that were exclusively in the education or science-education fields were reported by 31.5% of the male acceptees, 40.3% of the female acceptees, 31.1% of the male rejectees, and 34.0% of the female rejectees. Journals whose content was exclusively directed toward the sciences were reported by 11.7% of the male acceptees, 10.1% of the female acceptees, 13.1% of the male rejectees, and 10.0% of the female rejectees.

Professional organizations (Tables A-92 and A-93). Types of professional affiliations did not distinguish between acceptees and rejectees or between males and females with the exception that in the male group, memberships that were limited to education organizations appeared to reduce the probability of acceptance.

The larger part of both the male and female groups were affiliated with organizations in the fields of education or science-education, and were members of both regional and national associations.

MALE AND FEMALE APPLICANTS TO THE SECONDARY UNITARY MEDIUM INSTITUTES - SUMMARY OF DIFFERENCES BETWEEN GROUPS

The male group reflected to a great extent the same characteristics as the sample from which they were drawn. Since the males comprised approximately 80% of the sample such a similarity was predictable.

A number of factors distinguished acceptees from rejectees among the males. More acceptees than rejectees had been teaching science or mathematics in senior high schools; had permanent secondary credentials; and had emphasized biology in their teaching schedules. The acceptees, moreover, had more undergraduate credits in biology, chemistry, physics, and all sciences as a whole; and more graduate credits in biology, education, and all sciences as a whole. In addition, the acceptees had better grades in undergraduate biology, mathematics, and education courses, and in graduate mathematics and education courses. Finally, the professional interests of the accepted males were directed to fields other than purely education more so than were those of the rejectees. Academic performance was the most clear-cut selection factor in this sample.

Virtually no significant differences were found between the female acceptees and rejectees, possibly because of the small numbers involved. However, differences did emerge between males and females. Female acceptees had more undergraduate credits in education; higher grade-point averages in undergraduate biology, mathematics, chemistry, and education courses; and had held their bachelor's and master's degrees longer, as a group, than had the male acceptees. The female acceptees had also had more experience teaching mathematics than had the males. On the other hand, the males had significantly more undergraduate credits in chemistry, physics, earth science, and all sciences together, and more graduate credits in earth science and education. Evidently higher grades offset fewer credits for the females in this sample.

Chapter 14

Attributes of Applicants to National Science Foundation Summer Institutes in 1964

A SUMMARY REPORT

The National Science Foundation sponsors a broad program of summer institutes for elementary, high school, and college teachers of science and mathematics. The 1964 program attracted more than 80,000 applicants who together submitted approximately 200,000 applications. This is a study of the attributes of these applicants. The two main objectives were, first, to describe the applicants in terms of personal characteristics, educational background, and professional experience and interests, and, second, to discover the differences, if any, between the accepted and rejected applicants on these characteristics.

Procedure

The data compiled and analyzed in this study were gathered from the biographical information found in the completed NSF institutes application forms provided by the summer institute directors. The following applicant groups were randomly sampled and studied separately.

	Sample Size	
	Acceptee	Rejectee
Elementary	800	800
Secondary Unitary L	800	800
Secondary Unitary M	525	525
Secondary Unitary H	125	125
Secondary Sequential L	150	150
Secondary Sequential M	400	400
Secondary Sequential H	200	200
College Low	125	125
College Medium	275	275
College High	600	600

The designations of L, M, and H, or low, medium, and high, refer to the preparation levels required by the institutes. "Unitary" institutes are completed in one summer session. "Sequential" institutes are continued for two or more summer sessions (one a year) and each involves the same participants.

Three groups in addition to the above were studied. First, a "Secondary Combined" group was formed by combining the data for all the secondary institute levels studied, together with 800 accepted and 800 rejected secondary school teacher applicants to institutes with unclassifiable preparation levels. This combined group was formed for the purpose of comparing secondary school teacher applicants to the summer institutes in 1964 with those in 1957 and 1960 (see Tables 1 to 18). The second and third additional groups were the male applicants and female applicants taken from the Secondary Unitary Medium sample.

Prior to sampling, the application forms of rejectees who had participated in any kind of NSF institute in 1962 or 1963 were eliminated. This step was designed to allow factors other than recent participation to be emphasized, if they existed, as criteria for rejection. Duplicate applications were also removed, so that an individual would be represented only once in the study.

Each of the 9 U.S. census regions, and a tenth that included Puerto Rico, U.S. territories, and U.S. schools overseas, was represented in the sample in proportion to the numbers of forms received from each region.

The responses to most of the questions on the 1964 NSF Summer Institutes application form were coded and then key-punched on data cards, and frequency counts of each response were made for each group studied. These counts appear in a separately-bound appendix in Tables A-1 to A-93. Means and standard deviations were computed for the numeric variables and the differences between the means for the accepted and rejected groups were tested for significance by the z-ratio. The results are shown in Tables 19 to 27. Zero counts were omitted from the N's on which the means were based for the following variables: recency of bachelor's and master's degrees, age, and undergraduate and graduate grade-point averages in the sciences and education. These means would have been distorted by including those individuals who did not answer the question, or who did not have a degree, etc.

The chi square test was used to determine significance of difference between acceptees and rejectees on variables with qualitative categories. Significant differences are marked with asterisks on the relevant tables in the appendix.

RESULTS OF THE STUDY

Personal Variables

Age (Tables 19 and A-3). The Secondary Sequential High sample contained the youngest acceptees and rejectees, on the average, and the College Low sample, the oldest. Acceptee group mean ages ranged from 31.2 years to 39.9 years, and rejectee group ages ranged from 31.3 years to 40 years.

In both the Secondary Unitary Medium and Secondary Sequential Medium samples, the acceptees were significantly older than the rejectees by about one and a half years, indicating that probably within certain limits, the older an applicant, the better his chances of acceptance.

The female applicants were older, on the average, than the male applicants in the same sample, but the difference was not statistically reliable. On the whole, age was not a pervasive factor in selection.

Citizenship (Table A-4). Most of the applicants to the NSF summer institutes in 1964 were U.S. citizens. There is no evidence that citizenship was considered seriously in selection. The following chart shows the percentage of non-U.S. citizens in each group. A minimum-to-maximum range is shown. The first figure represents those whose response was "non-U.S. citizen": the second figure includes both the latter plus those who gave no response to the question.

	Percentage of non-U.S. Citizens	
	Acceptees	Rejectees
Elementary	0.6 to 3.6	0.5 to 5.9
Secondary Unitary L	0.1 to 3.5	0.3 to 3.3
Secondary Unitary M	0.4 to 3.6	0.6 to 4.2
Secondary Unitary H	0.8 to 4.8	0.8 to 4.0
Secondary Sequential L	0.0 to 4.7	0.0 to 2.7
Secondary Sequential M	1.0 to 2.5	0.8 to 4.8
Secondary Sequential H	0.5 to 2.5	0.5 to 1.5
College Low	4.8 to 6.4	6.4 to 7.2
College Medium	4.0 to 5.8	5.1 to 7.3
College High	6.2 to 7.7	7.7 to 9.7
Male	0.5 to 4.4	0.5 to 4.3
Female	0.0 to 0.8	1.0 to 4.0

TABLE 19 AGE

Sample	Group	N Responding	Mean Age in Years
Elementary	A	800	37.97
	R	800	38.83
Secondary Unitary L	A	800	35.08
	R	800	34.50
Secondary Unitary M	A	520	35.13*
	R	520	33.82
Secondary Unitary H	A	125	33.68
	R	125	32.47
Secondary Sequential L	A	150	34.61
	R	150	33.03
Secondary Sequential M	A	400	33.35**
	R	400	31.74
Secondary Sequential H	A	200	31.18
	R	200	31.33
College Low	A	124	39.94
	R	124	40.00
College Medium	A	273	38.05
	R	273	38.35
College High	A	598	37.34
	R	592	38.84
Male	A	402	34.70
	R	422	33.49
Female	A	118	36.60
	R	98	35.27

In terms of proportions, not actual numbers, the largest non-U.S. citizen group was among the applicants to high preparation level institutes for college teachers; the smallest non-U.S. group was among the applicants to high preparation level sequential institutes for high school teachers.

Marital Status (Table A-5). The ratio of married to single applicants in each of the samples was as follows:

	Acceptees	Rejectees
Elementary	3.6 to 1	4.5 to 1
Secondary Unitary L	3.9 to 1	4.1 to 1
Secondary Unitary M	3.3 to 1	2.8 to 1
Secondary Unitary H	4.6 to 1	4.5 to 1
Secondary Sequential L	4.1 to 1	2.9 to 1
Secondary Sequential M	3.0 to 1	2.6 to 1
Secondary Sequential H	2.4 to 1	3.2 to 1
College Low	9.2 to 1	7.8 to 1
College Medium	6.3 to 1	3.9 to 1
College High	4.3 to 1	3.9 to 1
Male	6.5 to 1	4.6 to 1
Female	.7 to 1	.5 to 1

Marital status did not appear to influence selection with the exception that within the Secondary Unitary Medium sample, single female applicants were preferred to married ones, while married male applicants were preferred to single.

Number of Dependents (Table 20 and A-6). The average number of dependents per applicant ranged from 1.9 (Secondary Unitary High) to 2.7 (College Low) in the accepted groups, and from 1.9 (several groups) to 2.6 (College Low) in the rejected groups. In only 2 cases did the average number of dependents for acceptees fall below those for rejectees. None of the differences between acceptees and rejectees was significant except for the Secondary Sequential Low sample, where it was somewhat in an applicant's favor to have more dependents (i.e., within limits; no dependents tended to be preferred to four).

Number of Dependent's Allowances (Tables 20 and A-7). The average number of allowances requested by the accepted groups ranged from 1.8 (Elementary and Secondary Unitary High) to 2.6 (College Low). Allowances requested by the rejected groups ranged from 1.8 (several groups) to 2.3 (College Low).

Allowances requested by the rejected groups ranged from 1.8 (several groups) to 2.3 (College Low). As with number of dependents, most of the accepted groups were characterized by the greater average number of allowance requests as compared to the rejectees. Again, the only significant difference found was for the Secondary Sequential Low group, where it appeared that the more allowances claimed, the better (up to 4, the established limit, at any rate).

The means quoted above were calculated for the complete groups. The same observations apply to the data when mean numbers of dependents and allowances are computed taking into account only those individuals having dependents. Most of the means in this set were roughly one dependent higher than the whole-group means. Here, as for the alternate data, there is no indication that number of dependents or allowance requests operate against the applicant.

Location of Schools Where Applicants Taught

City (Table A-8). In 1960, U.S. communities with populations of less than 250,000 accounted for 78.6% of the U.S. population. From 80 to 90% of the acceptees and from 80 to 90.2% of the rejectees taught in these smaller communities in 1964. Applicants from these communities to the medium level secondary unitary institutes had a slightly greater chance of being rejected if they were male. Also, if the applications were to the low level unitary institutes, there was an increased chance of rejection of those from the smaller communities. This finding was not highly significant, and it is doubtful that teaching in a small community had either a positive or negative effect on one's chances of being accepted.

	Percentage of Applicants from Communities of under 250,000	
	Acceptees	Rejectees
Elementary	85.1%	85.1%
Secondary Unitary L	85.9	89.9
Secondary Unitary M	84.8	84.2
Secondary Unitary H	90.4	82.4
Secondary Sequential L	89.3	88.0
Secondary Sequential M	83.0	87.5
Secondary Sequential H	80.0	86.5
College Low	86.4	80.8
College Medium	90.9	90.2
College High	86.8	86.3
Male	86.2	85.9
Female	79.8	77.0

TABLE 20 AVERAGE NUMBERS OF DEPENDENTS AND ALLOWANCE REQUESTS

Sample	Group	N	Dependents Mean Number per Applicant		Dependent's Allowances Mean Number per Applicant	
			+	++	+	++
Elementary	A	800	2.1	3.0	1.8	2.7
	R	800	2.1	2.9	1.9	2.7
Secondary Unitary L	A	800	2.0	2.8	1.9	2.7
	R	800	2.0	2.8	2.0	2.6
Secondary Unitary M	A	525	2.0	2.9	1.9	2.8
	R	525	1.9	2.8	1.8	2.6
Secondary Unitary H	A	125	1.9	2.8	1.8	2.7
	R	125	2.1	3.0	1.9	2.9
Secondary Sequential L	A	150	2.4*	3.1*	2.2*	2.9*
	R	150	2.1	2.9	1.9	2.6
Secondary Sequential M	A	400	2.1	3.0	1.9	2.8
	R	400	1.9	2.9	1.8	2.7
Secondary Sequential H	A	200	2.0	3.1	1.9	2.9
	R	200	1.9	2.8	1.8	2.6
College Low	A	125	2.7	3.1	2.6	2.9
	R	125	2.6	3.0	2.3	2.8
College Medium	A	275	2.4	3.0	2.3	2.8
	R	275	2.2	3.0	2.0	2.8
College High	A	600	2.3	2.9	2.2	2.8
	R	600	2.3	3.0	2.1	2.9
Male	A	406	2.4	3.0	2.3	2.9
	R	425	2.2	2.8	2.1	2.7
Female	A	119	0.7	2.0	0.6	1.8
	R	100	0.7	2.0	0.6	2.0

+ Entire group counted when computing mean.

++ Only those with dependents counted in mean.

In 1960, U.S. communities with populations between 1/4 million and 1/2 million accounted for 5.9% of the U.S. population. In 1964, from 2.4% to 8.4% of the acceptees, and from 2.8% to 12% of the rejectees taught in such cities.

	Percentage of Applicants from Cities of 250,000 to 499,999	
	Acceptees	Rejectees
Elementary	6.5%	6.9%
Secondary Unitary L	6.9	5.0
Secondary Unitary M	6.0	4.8
Secondary Unitary H	2.4	12.0
Secondary Sequential L	4.7	2.8
Secondary Sequential M	8.4	6.6
Secondary Sequential H	8.0	6.5
College Low	6.4	10.4
College Medium	4.3	3.9
College High	6.0	5.8
Male	4.5	4.2
Female	8.2	5.0

The probability of acceptance was somewhat favorable for applicants from this size of city to secondary unitary institutes, low level. Otherwise, teaching in these cities did not appear to influence selection. In some cases there appeared to be fairly large differences in percentages of acceptees and rejectees, but the small sizes of the samples involved make these differences unreliable.

In 1960, U.S. communities with populations of over 1/2 million accounted for 15.5% of the U.S. population. In 1964, from 6.1% to 11.0% of the acceptees and from 5.2% to 11.6% of the rejectees represented the larger cities.

Applicants from the large cities were more favored than those from cities under 1/4 million by the low level secondary unitary institutes. Female applicants from large cities to the secondary unitary institutes, medium level, had a greater probability of rejection than did the male applicants from large cities, as compared to the pattern of male-female selection for all cities under 1/2 million. Other than these barely significant findings, size of city of residence did not appear to affect selection.

	Percentage of Applicants from Cities of Over 500,000	
	Acceptees	Rejectees
Elementary	8.6%	8.4%
Secondary Unitary L	7.5	5.2
Secondary Unitary M	9.8	11.6
Secondary Unitary H	7.2	5.6
Secondary Sequential L	6.1	9.5
Secondary Sequential M	9.5	6.7
Secondary Sequential H	11.0	7.0
College Low	7.2	8.8
College Medium	5.4	6.6
College High	7.4	8.1
Male	8.7	9.4
Female	11.5	18.0

State (Tables 21 and A-9). The number of applicants from each state to institutes for elementary teachers was roughly proportional to the number of elementary school teachers from each state as reported by the 1960 U.S. census. There were slightly fewer applicants than might be expected from Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Illinois, Georgia, Kentucky, and California. There were slightly more applicants than would be expected from Minnesota, Iowa, Kansas, Mississippi, Louisiana, Washington, and Hawaii.

The number of applicants from each state to institutes for secondary school teachers was closely proportional to the number of U.S. secondary school science and mathematics teachers in each state.

The number of applicants from each state to institutes for college or university instructors was proportional in most cases to the distribution of U.S. college instructors throughout the states. Exceptions were Massachusetts, New York, Ohio, Illinois, and the District of Columbia, who yielded fewer applicants than might be expected, and Michigan, Wisconsin, and Florida, who yielded slightly more applicants than might be expected.

The ratio of acceptees to rejectees from each state may be influenced partly by the degree of availability of institute types and levels in or near each state, and partly by the actual numbers of applications, which reflect the prevailing degrees of interest. There is no consistent trend apparent among the summer institute levels with regard to the ratio of acceptees to rejectees in each state. Since the samples were distributed among 55 states and territories, the frequencies were too small in many cases to yield meaningful results.

State Where Applicant Taught

Sample	Significantly more ACCEPTEES than would be expected by chance	Significantly more REJECTEES than would be expected by chance
Elementary	Pennsylvania New York	Kansas Illinois Iowa Michigan Ohio Washington
Secondary Unitary M		Texas
Secondary Sequential H	Illinois	
College Low	California	
College High		Florida

With respect to these data, incidentally, there is no correspondence between the states with significantly more acceptees or rejectees in 1964, and such states in 1960.

Census Region (Tables 21 and A-10). The number of applicants to institutes for elementary teachers from each region matches the regional distribution of U.S. teachers very closely in only two cases: West South Central and East North Central. In the cases of the New England, Middle Atlantic, and South Atlantic regions the ratio of percentage of applicants to percentage of resident elementary school teachers was smaller than one, and in the cases of the West North Central, East South Central, Mountain, and Pacific regions, the ratio was greater than one.

The number of applicants to institutes for secondary school teachers from each region matches the regional distribution of U.S. secondary school science and mathematics teachers fairly closely. The largest discrepancy

TABLE 21 REGIONAL AND STATE DISTRIBUTION OF (1) U.S. TEACHERS AT EACH TEACHING LEVEL, AND (2) APPLICANTS TO EACH INSTITUTE LEVEL

Region and State	% of All Elementary		% of All Secondary Sci. and Math.		% of All College	
	1	2	1	2	1	2
Northeast	22.8	12.2	22.5	21.0	28.3	18.2
New England	5.6	2.6	6.5	5.5	7.8	4.2
Maine	.6	.2	.6	.6	.3	.3
New Hampshire	.3	.3	.4	.6	.4	.4
Vermont	.2	.3	.3	.2	.3	.6
Massachusetts	2.7	1.2	3.0	2.8	4.7	1.8
Rhode Island	.4	.2	.5	.3	.5	.4
Connecticut	1.4	.4	1.6	1.0	1.5	.7
Middle Atlantic	17.2	9.6	16.0	15.5	20.5	14.0
New York	8.4	5.0	7.8	6.6	12.1	6.7
New Jersey	3.4	2.0	2.8	3.0	2.2	1.8
Pennsylvania	5.3	2.6	5.5	5.9	6.2	5.5
North Central	29.1	33.9	28.1	30.4	28.3	30.1
East North Central	19.5	19.9	18.0	18.8	19.0	17.3
Ohio	5.0	5.4	4.7	4.8	4.6	3.3
Indiana	2.5	2.8	2.3	2.2	2.5	1.2
Illinois	5.3	3.9	4.4	4.8	6.1	4.2
Michigan	4.5	5.4	4.4	4.2	3.5	4.6
Wisconsin	2.2	2.4	2.2	2.8	2.2	4.0
West North Central	9.6	14.0	10.1	11.6	9.3	12.8
Minnesota	1.9	3.9	2.1	2.9	2.0	3.0
Iowa	1.8	3.2	2.3	2.5	1.6	2.8
Missouri	2.3	2.4	2.0	2.0	2.6	2.2
North Dakota	.4	.6	.7	.7	.4	1.1
South Dakota	.6	.6	.6	.5	.4	.6
Nebraska	1.1	.7	1.0	1.2	1.0	.9
Kansas	1.5	2.6	1.3	1.8	1.3	2.2
South	31.6	30.7	35.0	31.3	26.4	29.8
South Atlantic	14.8	11.1	15.3	14.8	12.4	13.4
Delaware	.2	.2	.3	.4	.1	0
Maryland	1.6	1.3	1.6	1.7	1.8	1.8
District of Columbia	.4	.2	.3	.2	1.8	.2
Virginia	2.3	2.0	2.3	2.0	1.7	1.8
West Virginia	1.2	.4	1.0	.8	.7	.9
North Carolina	2.6	2.0	2.8	2.0	2.1	2.4
South Carolina	1.4	1.4	1.7	2.1	.8	1.2
Georgia	2.4	.6	2.2	2.0	1.6	1.6
Florida	2.6	3.0	3.1	3.6	1.8	3.5

TABLE 21 (continued)

REGIONAL AND STATE DISTRIBUTION OF (1) U.S. TEACHERS AT EACH TEACHING LEVEL, AND (2) APPLICANTS TO EACH INSTITUTE LEVEL

Region and State	% of All Elementary		% of All Secondary Sci. and Math.		% of All College	
	1	2	1	2	1	2
East South Central	7.0	9.3	7.5	6.4	5.2	6.0
Kentucky	1.8	.8	1.6	1.1	1.3	1.8
Tennessee	2.1	1.8	1.8	1.1	1.8	1.6
Alabama	1.9	2.4	2.3	2.4	1.3	1.2
Mississippi	1.2	4.3	1.8	1.8	.9	1.4
West South Central	9.8	10.3	12.2	10.1	8.7	10.4
Arkansas	.9	1.8	1.3	1.1	.6	1.2
Louisiana	2.0	3.0	2.4	1.8	1.9	1.9
Oklahoma	1.3	.7	1.7	1.5	1.5	2.1
Texas	5.6	4.8	6.8	5.7	4.7	5.2
West	16.6	22.5	14.2	15.2	17.0	19.0
Mountain	4.6	8.6	4.6	5.4	3.9	5.0
Montana	.5	.6	.5	.6	.3	.5
Idaho	.5	.7	.5	.4	.3	.2
Wyoming	.2	1.0	.3	.4	.2	.4
Colorado	1.1	2.0	1.3	1.2	1.3	1.4
New Mexico	.7	1.4	.6	.7	.4	.4
Arizona	.9	1.5	.6	1.1	.6	1.2
Utah	.5	1.0	.6	.8	.7	.8
Nevada	.2	.4	.2	.2	.1	.1
Pacific	12.0	13.9	9.6	9.8	13.1	14.0
Washington	1.7	5.2	1.8	2.0	1.4	2.3
Oregon	1.2	1.6	1.0	1.2	1.2	1.2
California	8.5	5.0	6.3	6.1	10.1	10.4
Alaska	.1	.1	.2	.1	0	0
Hawaii	.5	2.0	.4	.4	.2	.1
Puerto Rico and other U.S.		2.4		3.3		.6
Foreign		.8		.9		2.3

1: Per cent of U.S. teachers within each level by region and state. Elementary data from *U.S. Census 1960*; College data from *Faculty and Other Professional Staff in Institutions of Higher Education, First Term, 1959-60*, Washington: U.S. Office of Education, 1963, Table 17; counts converted to percentages; Secondary data derived from Registry of Junior and Senior High School Science and Mathematics Teachers, NEA, 1964-65.

2: Per cent of applicants in this study to each institute level, by region and state where they taught.

between science teacher population and number of applicants was observed for the West South Central region, which had 12.2% of the U. S. science teachers and yielded 10.1% of the applicants to secondary institutes.

The number of applicants to institutes for college or university instructors were fewer than might be expected from the New England, Middle Atlantic, and East North Central regions, when the regional distribution of U.S. college teachers is considered. The West North Central and West South Central regions yielded slightly more applicants than might be expected.

Availability of institutes in the various regions, as with the individual states, was probably a significant factor in most cases in determining the ratio of acceptees to rejectees from each region. The following chart lists regions with significantly more acceptees or rejectees than would be expected by chance.

Census Regions with Significantly Large Groups

Sample	Significantly more ACCEPTEES than would be expected by chance	Significantly more REJECTEES than would be expected by chance
Elementary	Middle Atlantic	West-North-Central East-North-Central
Secondary Unitary L		West-South-Central
Secondary Unitary M		West-South-Central
Secondary Sequential L	West-North-Central	
Secondary Sequential H	East-North-Central	
College Low	Pacific West	
College High		Pacific West
Male		West-South-Central

As with states, the regions in 1964 with significantly more acceptees or rejectees than would be expected by chance, differ completely from the regions thus involved in 1960. It is interesting to note that in this civil rights year, the region that includes Alabama and Mississippi does not enter significantly in the acceptee or rejectee percentages.

TABLE 22 MEAN NUMBER OF UNDERGRADUATE SEMESTER HOURS[+]

Sample	Group	N	Biology	Chemistry	Physics	Math.	Earth Science	Education	Engi-neering	All Sci. & Math.
Elementary[+]	A	800	7.97	2.88	2.24	6.88*	3.34	25.22	.04	22.87
	R	800	8.30	2.53	1.97	6.17	3.13	26.47	.07	21.67
Secondary Unitary L	A	800	15.35*	8.69*	4.78	10.99	3.30	20.83	.07	43.93*
	R	800	14.08	7.76	4.96	11.70	3.02	21.71	.07	41.62
Secondary Unitary M	A	525	15.62**	11.09	7.83	17.57	2.63*	19.51		55.60**
	R	525	13.35	10.18	6.92	17.19	3.58	20.15	.16	51.92
Secondary Unitary H	A	125	18.29	14.26*	7.65*	15.49	2.58	19.71	.33	59.90**
	R	125	17.24	10.28	5.29	17.02	2.36	20.87		53.10
Secondary Sequential L	A	150	14.29	8.17	6.01	13.88	2.44	22.44	.14	45.83
	R	150	14.77	9.88	5.60	12.15	2.63	21.69	.17	45.90
Secondary Sequential M	A	400	12.97	13.57**	8.01	18.72	3.27	18.75	.30	57.73**
	R	400	13.85	11.35	7.34	17.36	2.66	19.85	.04	52.65
Secondary Sequential H	A	200	10.72	10.69	10.15**	23.89	2.39	19.01	.56	58.50
	R	200	12.25	10.11	7.49	23.28	2.41	20.42	.16	56.20
College Low	A	125	2.30**	8.66	10.48**	16.16**	3.48	8.76	15.76**	57.20**
	R	125	7.84	6.53	5.65	11.27	2.24	11.20	3.41	38.92
College Medium	A	275	5.35	12.95*	10.62	21.61	2.51	12.50	2.77	56.85*
	R	275	4.45	10.25	10.00	20.95	1.91	12.59	2.31	51.17
College High	A	600	10.23	16.80**	10.90	18.79	2.58	7.32**	3.12	63.27**
	R	600	10.77	12.77	10.01	18.19	2.75	10.09	2.45	57.62
Male	A	406	15.59**	11.65**	8.74*	17.32	2.97**	18.54		56.98**
	R	425	13.01	9.84	7.32	17.21	4.05	19.66	.20	52.05
Female	A	119	15.72	9.18	4.72	18.42	1.47	22.82		50.88
	R	100	14.81	11.63	5.22	17.11	1.58	22.23		51.39

[+] Credits in the sciences and mathematics for elementary school teachers should be interpreted as being primarily education department credits.

Educational Background

Undergraduate Semester Hours or Credits (Tables 22 and A-11 to A-18). The application form asked for a listing of university course work and grades in biological sciences, chemistry, physics, mathematics, earth science, and education. Certain college level institutes also asked for credits in engineering.

Education courses accounted for the highest mean number of undergraduate credits for the elementary and the secondary school groups except for those applying to the high level secondary sequential institutes. These, and applicants to the college institutes tended to have more undergraduate credits in mathematics than in the other fields.

Biology and chemistry were the next most popular undergraduate courses after education and mathematics for the elementary and secondary groups. Physics and chemistry were usually the next most popular subjects after mathematics and education among the college groups.

No one subject was seen to distinguish consistently between acceptees and rejectees throughout the groups studied. Credits in chemistry, however, may be noted to have increased the probability of acceptance in five cases: low and high level secondary unitary; medium level secondary sequential; and medium and high level college institues. Biology credits favored selection among low and medium level secondary unitary institutes, and low level college institutes. Credits in mathematics favored selection particularly in the low level college institutes.

Total science undergraduate credits, as contrasted to credits within a particular science, appeared to influence selection quite consistently. In all groups except elementary and low and high level secondary sequential, the greater the number of science credits, the greater the probability of acceptance.

Graduate Credits (Tables 23 and A-19 to A-26). All groups with the exception of the high level secondary sequential acceptees, and the medium and high level college acceptees and rejectees, had more graduate credits in education than in any other subject. Credits in education favored selection in the elementary and medium level secondary unitary groups. Mathematics and biology were next to education in mean number of graduate credits.

Graduate credits in biology, chemistry, physics, mathematics, or earth science, frequently appeared to be in the applicant's favor, except for the medium level college institutes, where credits in mathematics had a somewhat negative effect on selection.

TABLE 23

MEAN NUMBER OF GRADUATE SEMESTER HOURS

Sample	Group	N	Biology	Chemistry	Physics	Math.	Earth Science	Engi-neering	Education	All Sci. & Math.
Elementary[+]	A	800	.68**	.22**	.40**	1.35*	.79**	.08	16.26**	3.17**
	R	800	.45	.07	.11	1.04	.43	.09	13.36	1.70
Secondary Unitary L	A	800	2.04	.70	.75	1.07	.78	.03	8.77	5.07
	R	800	1.64	.76	.54	1.34	.64	.01	8.11	4.48
Secondary Unitary M	A	525	3.52*	1.67	1.49	3.40	.71		10.20**	10.66**
	R	525	2.42	1.33	1.06	2.55	.79		7.57	7.92
Secondary Unitary H	A	125	9.06**	3.15**	1.82	4.21	.92	.04	9.44	18.21**
	R	125	3.36	.91	.69	3.84	.48		8.92	9.09
Secondary Sequential L	A	150	2.08	1.27	1.51	2.07	1.12*		6.55	7.60
	R	150	2.02	1.17	.97	1.26	.51		6.64	5.70
Secondary Sequential M	A	400	3.35**	3.14**	1.73**	5.61**	1.02		7.88	14.20**
	R	400	1.50	1.07	.89	1.91	.51	.41	6.58	5.56
Secondary Sequential H	A	200	3.37	2.10*	2.49**	8.01**	.55	.21	6.03	15.74*
	R	200	1.92	1.00	.69	4.47	.28	4.69	4.70	8.17
College Low	A	125	.18	1.00	2.58**	5.02	.80	1.96*	8.94	14.18
	R	125	4.03**	.91	.82	5.36	1.15	.78	9.59	14.04
College Medium	A	275	1.89	5.38	3.19	11.67	1.09	.43	11.31	23.53
	R	275	1.18	5.49	4.08	14.79*	1.09	2.39	9.92	26.86
College High	A	600	9.98	10.08**	6.47**	9.99	1.25	1.28	4.55	40.47**
	R	600	8.24	4.86	3.61	10.18	1.97		8.41	29.82
Male	A	406	3.79**	1.65	1.60	3.41	.85		11.18**	11.20**
	R	425	2.21	1.31	1.17	2.73	.85		8.11	8.04
Female	A	119	2.59	1.72	1.11	3.36	.23		6.89	8.82
	R	100	3.31	1.42	.59	1.80	.54		5.31	7.40

[+] Credits in the sciences or mathematics for elementary school teachers should be interpreted as being primarily education department credits.

Total graduate credits in the sciences increased the probability of acceptance to the elementary; medium and high level unitary; medium and high level sequential; and high level college institutes.

The institutes that appeared to use graduate credits as selection criteria most frequently were the elementary; medium and high level sequential; and the high level college institutes.

Undergraduate Grade-Point Averages (Tables 24 and A-27 to A-33). The means were computed only for those with credits in the subjects specified. Mean acceptee grades ranged from 2.23 (C+) in physics (secondary unitary high) to 3.19 (B+) in education (college high). Mean rejectee grades ranged from 2.13 in chemistry and engineering (elementary and secondary unitary low institutes respectively) to 3.11 in education (college medium institutes).

The highest group grade averages were observed for education. The grades generally decreased in the order: earth science, biology, mathematics, chemistry and physics. The grades in engineering were among the highest, but except for the college groups, the number of individuals involved was usually too small to make the result reliable.

Acceptee grades for the most part were higher than rejectee grades in all subjects. These differences were frequently significant in the cases of biology, chemistry, physics, mathematics, and education, indicating that in several of the institute levels, undergraduate grades constituted a strong factor in selection. This was particularly true in the elementary; secondary unitary medium; secondary sequential, medium and high; and college high institutes.

The highest group grade-point averages were found for the high level college institutes. It is interesting to note that the female applicants (secondary unitary medium institutes) had higher grade averages in all fields than did the male applicants. These differences were significant in the cases of biology, chemistry, mathematics, physics, and education.

Graduate Grade-Point Averages (Tables 25 and A-34 to A-40). Graduate grades for acceptees ranged from 2.8 in chemistry (secondary sequential low) to 3.6 in earth science (college low). Rejectee graduate grades ranged from 2.6 in physics (elementary) to 3.4 in education (college low). The group averages were predominantly in the B+ range, particularly in engineering, education, mathematics, and biology.

Graduate grades in biology, physics, and mathematics were more effective in selection than were other subjects. In these cases, the higher the grades, the greater the probability of selection. The elementary, secondary sequential high, and college high institutes appear to have used grades as selection criteria somewhat more widely than did the other groups.

Present State of Knowledge--Self-Evaluation (Tables A-41 to A-46). The applicants were asked to evaluate their knowledge in biology, chemistry, physics, mathematics, earth sciences, and education, by indicating whether the credits they listed on the form underestimated, overestimated, or fairly represented their background. The largest categories by far for each subject were "no entry" and "record is a good estimate of my knowledge."

Significantly more acceptees than rejectees from high level unitary institutes reported that their knowledge in mathematics and chemistry was less than that implied by the record, and from medium level sequential institutes, that other knowledge in biology was less than implied. On the other hand, more rejectees gave this response in the low level unitary institutes with regard to physics, and in the low level sequential institutes with regard to biology.

Major for Bachelor's Degree (Table A-47). As might be predicted, the most typical major subject for the bachelor's degree was science or mathematics for most of the secondary and college groups. For the secondary groups, either an education or a combined education and science or mathematics major was the next most popular, but for the college groups, non-science, non-mathematics majors were the next most frequent. Education was the most frequent major among the elementary school teachers and a non-science major was second.

A science or mathematics major increased the probability of acceptance to secondary unitary institutes at all preparation levels, at secondary sequential medium institutes, and at college institutes, low and high preparation levels. Only at the low level sequential institutes did a mathematics or science major appear to mitigate against the applicant. There, a major in education would have been more effective. More frequently, a major in education, even with a mathematics or science concentration, worked against the applicant. This could be observed in the secondary unitary institutes, medium and high levels; sequential, medium level institutes; and college, high level institutes.

On the whole, applicants to secondary and college institutes whose academic preparation emphasized science or mathematics had significantly better chances of being accepted than if their preparation were largely in educational methods.

TABLE 24

MEAN UNDERGRADUATE GRADE-POINT AVERAGES^{+}

Sample	N^{++}	Grp.	Biology		Chemistry		Physics		Math.		Earth Sci.		Education		Engin.	
			N	M	N	M	N	M	N	M	N	M	N	M	N	M
Elementary	800	A	693	2.59*	280	2.36**	270	2.44*	655	2.63**	400	2.72*	723	3.03**	1	3.80
	800	R	695	2.51	275	2.13	242	2.30	637	2.44	385	2.62	756	2.91	3	2.30
Sec. Unit. L	800	A	690	2.64*	573	2.31	439	2.28	689	2.41	309	2.63	745	2.94*	3	2.63
	800	R	669	2.56	537	2.23	448	2.21	680	2.34	301	2.62	747	2.88	3	2.13
Sec. Unit. M	525	A	444	2.74**	433	2.41	346	2.36	475	2.62**	195	2.72	480	3.00**	0	
	525	R	431	2.59	410	2.34	325	2.29	479	2.50	217	2.70	486	2.92	13	2.47
Sec. Unit. H	125	A	102	2.84	106	2.40	81	2.21	103	2.56	43	2.66	115	2.97	1	3.80
	125	R	99	2.76	90	2.24	66	2.18	114	2.51	41	2.71	117	2.94	0	
Sec. Seq. L	150	A	128	2.69	110	2.34	92	2.26	133	2.56*	51	2.54	138	3.01*	1	3.30
	150	R	132	2.54	112	2.20	106	2.18	133	2.34	58	2.57	144	2.86	1	2.30
Sec. Seq. M	400	A	316	2.83**	345	2.60**	277	2.52**	383	2.69**	161	2.79	375	3.04**	2	2.55
	400	R	321	2.60	326	2.31	266	2.18	367	2.49	137	2.65	379	2.91	1	3.30
Sec. Seq. H	200	A	147	2.87**	144	2.68**	138	2.63**	193	2.96**	68	3.06**	187	3.11**	1	3.30
	200	R	159	2.61	154	2.30	137	2.21	189	2.59	62	2.66	185	2.93	1	3.80
College L	125	A	36	2.86	95	2.66	85	2.67	10	2.85	40	2.80	61	3.13	48	3.03
	125	R	71	2.86	83	2.67	61	2.64	98	2.86	40	2.88	71	3.03	12	2.76
College M	275	A	124	2.92	200	2.90	173	2.78	267	2.93	83	3.10	186	3.08	19	3.12
	275	R	110	2.86	180	2.78	165	2.65	251	2.90	60	2.88	183	3.11	31	3.04
College H	600	A	306	3.16**	490	2.97**	383	2.81	553	3.04**	153	3.12	262	3.19**	45	3.22
	600	R	352	2.93	478	2.75	385	2.70	553	2.91	173	3.03	328	3.08	35	3.11
Male	406	A	342	2.67**	349	2.35	291	2.34	372	2.52*	164	2.68	368	2.96**		
	425	R	340	2.53	408	2.28	268	2.23	388	2.43	192	2.68	391	2.85	3	2.47
Female	119	A	102	2.97	84	2.65	55	2.47	103	3.00*	31	2.88	112	3.14		
	100	R	91	2.82	75	2.59	57	2.53	91	2.80	25	2.86	95	3.19		

$^{+}$A = 4   B = 3   C = 2   D = 1

$^{++}$Total N in Group

TABLE 25

MEAN GRADUATE GRADE-POINT AVERAGES[+]

Sample	N[++]	Grp.	Biology		Chemistry		Physics		Math.		Earth Sci.		Education		Engin.	
			N	M	N	M	N	M	N	M	N	M	N	M	N	M
Elementary	800	A	79	3.09	26	3.18	45	3.11*	164	3.18**	102	3.21	545	3.29**		
	800	R	56	3.02	9	2.69	17	2.56	136	2.97	66	3.11	462	3.21	1	1.30
Sec. Unit. L	800	A	163	3.05	90	2.87	80	2.86	118	2.97	93	2.93	407	3.13		
	800	R	137	3.03	70	2.71	66	2.80	129	2.85	74	2.92	379	3.15		
Sec. Unit. M	525	A	136	3.14	99	3.04	94	3.03	159	3.15**	59	3.10	303	3.20*		
	525	R	100	2.99	73	2.92	72	3.08	129	2.87	55	3.09	230	3.11		
Sec. Unit. H	125	A	54	3.24*	25	3.12	33	2.88	42	3.04	21	2.87	78	3.18		
	125	R	31	2.91	90	2.98	12	2.97	31	3.03	11	2.89	58	3.23		
Sec. Seq. L	150	A	34	2.96	31	2.80	34	3.17*	40	3.00*	25	3.02*	68	3.19		
	150	R	27	2.82	20	2.70	20	2.60	24	2.65	14	2.62	61	3.13		
Sec. Seq. M	400	A	115	3.27*	113	3.08	93	3.04	168	3.16	48	3.12	198	3.23*		
	400	R	59	3.07	43	2.94	42	2.86	89	3.00	26	2.97	174	3.13		
Sec. Seq. H	200	A	38	3.33**	46	3.20**	43	3.30*	110	3.20	7	3.16	81	3.21	1	3.30
	200	R	25	2.74	18	2.74	18	2.91	69	3.09	10	3.30	71	3.17	2	2.80
College L	125	A	4	3.05	10	3.15	36	3.20*	59	3.23	11	3.62*	55	3.38	30	3.47
	125	R	18	3.13	8	3.18	15	2.77	38	3.29	8	3.05	57	3.44	9	3.36
College M	275	A	43	3.07	77	3.12	76	3.10	146	3.24	31	3.04*	161	3.36	15	3.40
	275	R	29	3.23	58	3.28	85	3.06	162	3.22	26	3.42	146	3.33	8	3.36
College H	600	A	164	3.44**	215	3.18**	187	3.16	345	3.28	68	3.40*	149	3.37	53	3.49
	600	R	166	3.29	148	2.98	164	3.13	291	3.21	74	3.18	256	3.30	29	3.25
Male	406	A	109	3.15	80	3.07	81	3.07	129	3.13**	55	3.12	254	3.21*		
	425	R	78	2.97	60	2.94	65	3.08	109	2.85	47	3.19	199	3.11		
Female	119	A	27	3.10	19	2.93	13	2.80	30	3.23	4	2.80	49	3.19		
	100	R	22	3.05	13	2.80	7	3.09	20	2.98	8	2.49	31	3.11		

[+] A = 4 B = 3 C = 2 D = 1

[++] Total N in Group

Major for the Master's Degree (Table A-48). Education was the most frequent major for the master's degree for those who had attained the master's in the elementary and secondary groups. Mathematics or science was the next most frequent major in these groups, with the exception of the elementary group, where a non-science major was second.

A graduate major in a science or mathematics was most typical of the college groups, while either education or a non-science appeared as a distant second.

Major for the master's degree distinguished between acceptees and rejectees in the college high level institutes, where a science or mathematics major was preferred to an education major. Other than this instance, major for the master's did not appear to be significant in selection.

Major for the Doctor's Degree (Table A-49). The only sizeable groups that had earned the doctorate were among the applicants to college institutes, medium and high levels. Here, the most typical major by far was in a science or mathematics, and there was no apparent relationship between kind of major and acceptance.

Highest Degree Earned (Table A-50). Among acceptees to elementary institutes, the master's was most typically the highest degree earned, while among rejectees the bachelor's was most typically the highest. The bachelor's degree was most frequently the highest earned in all the secondary groups, while the master's was most typical among the college groups.

Kind of degree appeared to influence selection at four institute levels: elementary, secondary unitary, medium and high, and college high. In these groups, the higher the degree, the greater the probability of selection. It should be noted, however, that considerable numbers of applicants were accepted who had other than the preferred degree.

Recency of the Bachelor's Degree (Table 26 and A-51). The group who, on the average, received their bachelor's most recently (approximately 7 years ago), were applicants to secondary sequential, high level institutes. The group who had their bachelor's degree the longest (13.5 to 15 years) were among the applicants to the various college institutes.

Number of years since the bachelor's distinguished between accepted and rejected groups in the cases of elementary; secondary unitary, low and medium levels; and secondary sequential, low and medium level institutes. In each of these cases it was advantageous to have had the bachelor's a long time. It may be that recency of the bachelor's had an indirect effect on selection due to the fact the more years that had elapsed, the greater the probability of having earned an advanced degree in the interim, and the advanced degree, as has been noted, had a certain amount of value in selection.

Highest Degree Earned

	N (each A & R)	No Degree		Bachelor's		Master's		Doctor's	
		%A's	%R's	%A's	%R's	%A's	%R's	%A's	%R's
Elementary	800	2.1	3.9	46.4	55.9	51.0	39.6	.5	.6
Sec.Unit. L	800	2.0	.5	67.4	71.5	30.7	27.8		.3
Sec.Unit. M	525		1.1	61.3	67.8	38.5	30.9	.2	.2
Sec.Unit. H	125			52.0	62.4	48.0	36.8		.8
Sec.Seq. L	150		1.3	77.3	74.0	22.7	24.7		
Sec.Seq. M	400	.5	.5	76.0	77.6	23.6	21.8		.3
Sec.Seq. H	200		.5	83.0	79.5	17.0	19.5		.5
College L	125	5.6$^+$		16.0	13.6	63.2	64.0	15.2	22.4
College M	275	2.2$^+$	1.8$^+$	16.4	13.5	70.9	75.6	10.6	9.1
College H	600	.2	.5	6.2	13.4	58.3	69.2	35.3	17.0
Male	A-406 R-425		1.2	59.3	66.6	40.4	32.0	.2	.2
Female	A-119 R-100		1.0	68.1	73.0	31.9	26.0		

$^+$Applicants to technical institutes.

Recency of the Master's Degree (Tables 26 and A-52). The most recent master's degrees were held by acceptees to high level secondary unitary institutes (6.3 years) and by rejectees to elementary institutes (6.6 years). Applicants to the high level college institutes had held their master's degrees for the longest time, on the average (9 years).

Recency of the master's degree did not appear to discriminate significantly between acceptees and rejectees except in the case of institutes for elementary teachers, where it was slightly in the applicant's favor to have had the degree a relatively long time.

Employment Background

Amount and Recency of Teaching Experience in Elementary Schools, High Schools, and Colleges (Tables A-53 to A-60 and Figures 2, 4, 6, 8, 10, 12, 14, 15, 16, 18, 20, 22). The teaching experience data were grouped in time intervals before and after June 30, 1954. Each group of applicants generally had had more years of experience after 1954 than prior to 1954 teaching in schools at their customary teaching level (i.e., high school teacher applicants with high school experience, rather than elementary school experience). Each applicant group had individuals who had taught at one time or another at either a lower or higher (usually lower) level than their present assignment. Teaching experience at a lower level was usually prior to June, 1954.

The distributions of the acceptee and rejectee groups in number of years of teaching experience were very similar, indicating that this factor did not have a pervasive effect on selection.

Mean Number of Years of Teaching Experience at Current School Level

	At Elementary Schools	At Secondary Schools						At Colleges		
Group:	Elementary	Unit.L	Unit.M	Unit.H	Seq.L	Seq.M	Seq.M	Col.L	Col.M	Col.H
A	4.3									
R	4.6									
A		3.4	3.7	3.3	3.8	3.3	2.8			
R		3.3	3.2	2.9	3.1	2.5	2.6			
A								3.3	3.1	3.3
R								3.5	2.9	3.0

Number of Years of Experience Teaching Specific Subjects (Tables 27 and A-61 to A-67). The highest number of years of teaching experience, predictably, was in mathematics. The means for just those with experience in the specified fields ranged from 3.0 years in earth science and biology (several groups) to 9.7 years in mathematics (elementary).

No one level of institute appeared to use teaching experience in the sciences consistently as a selection device. Data for whole groups (i.e.,

TABLE 26

RECENCY OF DEGREES

Sample	Group	N of Those With Bachelors	Mean Number of Years Since Bachelors	N of Those With Masters	Mean Number of Years Since Masters
Elementary	A	778	11.82*	413	7.41*
	R	776	10.57	321	6.61
Secondary Unitary L	A	782	10.38*	244	7.71
	R	790	9.34	225	7.51
Secondary Unitary M	A	521	10.50*	202	7.95
	R	519	9.36	163	8.49
Secondary Unitary H	A	124	9.61	60	6.33
	R	125	8.52	48	7.27
Secondary Sequential L	A	150	10.07*	34	7.85
	R	147	8.34	26	6.89
Secondary Sequential M	A	396	8.85*	94	7.95
	R	397	7.60	88	7.60
Secondary Sequential H	A	198	6.94	39	6.72
	R	197	6.86	38	7.08
College Low	A	117	13.81	99	8.71
	R	123	14.95	105	8.71
College Medium	A	264	13.64	216	9.04
	R	266	13.81	229	8.35
College High	A	585	13.71	520	9.09
	R	586	13.48	494	9.02
Male	A	402	10.03	165	7.00
	R	420	9.05	137	8.36
Female	A	119	12.12	37	12.19
	R	99	10.68	26	9.15

including "no experience") revealed several instances in which amount of experience distinguished between acceptees and rejectees. These were by no means consistent within a subject field. Biology teaching experience favored selection at the secondary unitary medium and college medium institutes; chemistry teaching experience favored selection at secondary unitary and secondary sequential, medium level institutes; physics teaching was favored at secondary unitary low, secondary sequential high, and college low level institutes; mathematics teaching was favored at medium level secondary sequential institutes, but seemed, as did general science teaching, to operate against the applicant at elementary and high level college institutes.

"Teaching other subjects" at the college level usually indicated teaching engineering, and in the cases of the college low and medium level institutes, this experience was in the applicant's favor.

The average amounts of teaching experience for just those who actually had experience in the specified fields failed to reveal significant differences between the accepted and rejected groups except for mathematics, where the results corresponded to the whole-group results. These findings indicate that, generally, it was not amount of teaching experience, but the presence or absence of experience that influenced selection. In the case of mathematics, however, it appears that number of years of teaching experience did have some significant effect.

Professional Experience During Past Five Years (Table A-68). Most of the applicants to institutes for elementary school teachers had the bulk of their recent experience in non-science plus science or mathematics teaching at the elementary level. Twenty per cent of the elementary acceptees had been administrators. The institute directors were urged to emphasize in selection individuals in key positions who could apply what was gained at the institutes most widely; hence the large number of administrators among the acceptees.

As might be expected, the predominant professional activity of high school and college teachers for the five years preceding application to NSF summer institutes in 1964 was teaching or supervising science and/or mathematics. Such experience was in an applicant's favor in the secondary unitary medium and high level institutes, in the secondary sequential, low level institutes, and in the three college institute groups.

Teacher Certification (Table A-69). The certification data were categorized as: "No Certificate," "Temporary Elementary," "Temporary Secondary," "Permanent Elementary," "Permanent Secondary," and "Permanent College." Junior college instructors comprised most of the latter category.

TABLE 27 TEACHING EXPERIENCE: MEAN NUMBER OF YEARS (Experienced Groups Only)

Sample	Grp.	N	Biology N	Biology Mean	Chemistry N	Chemistry Mean	Physics N	Physics Mean	Math. N	Math. Mean	Earth Sci. N	Earth Sci. Mean	Gen.Science N	Gen.Science Mean	Other N	Other Mean
Sec. Unit.L	A	800	306	4.76	202	4.76	157	4.46	489	5.84	119	3.76	585	5.04	20	8.75
	R	800	255	5.06	169	4.86	121	4.12	488	6.23	101	4.24	549	4.99	16	6.75
Sec. Unit.M	A	525	237	5.07	187	5.43	148	4.62	374	6.25	60	3.58	315	4.43	16	5.81
	R	525	183	5.16	151	5.02	124	4.81	361	5.70	60	4.42	311	4.78	7	3.71
Sec. Unit.H	A	125	75	5.33	43	5.91	31	3.97	62	6.15	9	3.00	73	5.19	0	0.0
	R	125	63	5.14	41	4.22	32	4.09	74	5.77	7	3.00	71	4.48	1	3.00
Sec. Seq. L	A	150	66	5.12	60	4.25	43	4.05	97	6.40	16	3.31	117	4.54	5	5.00
	R	150	70	4.50	47	4.81	35	5.14	89	5.53	25	3.20	111	4.89	5	3.00
Sec. Seq. M	A	400	161	4.37	171	4.87	137	4.28	285	6.05**	41	3.24	251	4.24	4	6.75
	A	400	132	4.4	120	4.42	108	4.57	276	4.83	33	3.76	240	4.06	1	3.00
Sec. Seq. H	A	200	58	4.38	52	3.67	61	3.82	158	5.37	14	3.00	99	4.21	6	5.5
	R	200	56	4.79	46	4.09	38	3.26	153	5.48	8	3.00	88	3.91	0	0.0
College Low	A	125	4	3.0	16	4.25	39	6.97	53	6.77	8	6.12	18	4.11	60	7.33
	R	125	20	7.75	8	7.38	17	5.35	37	8.13	8	6.75	17	4.18	32	7.06
College Medium	A	275	42	3.71	91	8.00	93	5.42	179	4.59	20	3.25	73	3.82	46	5.83
	R	275	35	3.14	67	7.03	84	5.38	185	8.49	10	4.00	62	4.21	17	5.06
College High	A	600	152	6.98	200	8.08	183	6.63	237	5.70**	44	5.39	120	4.12	83	6.01
	R	600	183	5.73	184	6.94	184	5.53	329	6.97	58	6.02	172	4.51	66	6.41
Male	A	406	186	4.83	154	5.05	132	4.63	283	5.85	55	3.64	252	4.53	14	5.86
	R	425	140	4.71	129	5.02	112	4.47	290	5.45	49	4.33	257	4.54	6	3.0
Female	A	119	51	5.94	33	7.24	16	4.56	91	8.33	5	3.0	63	4.03**	2	5.5
	R	100	43	6.60	22	5.05	12	8.00	51	9.37	11	4.82	54	5.96	1	8.0

The college groups had the highest proportion of "no credential" responses, but a considerable number among them were fully accredited at the secondary level. The largest proportion of permanent secondary credentials within a college group was observed for the college medium institutes (A's -- 38%, R's -- 34%). Lack of certification of any kind seemed to be in the applicant's favor in the college, high level group, but this is probably attributable to the fact that acceptees to the advanced institutes are likely to be college or university instructors with advanced degrees rather than teaching credentials. Except for the high level college institutes, lack of certification did not appear to influence selection.

Temporary credentials were most infrequent among the elementary and college groups. With respect to the secondary institutes, the medium level unitary group had the smallest percentage of temporary credentials (A's -- 10.7%, R's -- 17.7%) and the medium level sequential group had the largest percentage of temporary credentials (A's -- 12.5%, R's -- 19.5%).

Full accreditation was the most typical category for both the elementary and secondary groups, and seemed to increase the probability of acceptance to the elementary and three of the secondary institutes -- unitary low and medium, and sequential medium level institutes.

Few individuals in the groups studied were certified at more than one teaching level.

Certification Deficiency (Table A-70). "No deficiency" was the most typical response of the elementary and secondary groups. (It was second to "not applicable" for the college groups.) The deficiency most frequently reported by both elementary and secondary school teachers was in sciences or mathematics. The largest mathematics-or-science-deficiency group was in the low level secondary unitary group (A's -- 14%, R's -- 14%). The smallest number with this deficiency at the secondary level were in the high level unitary institute group (A's -- .8%, R's -- 4.8%).

With the exceptions of the elementary institutes, where a "no deficiency" response appeared to be desirable, and the medium level unitary institutes, where a mathematics or science deficiency was undesirable, certification deficiency did not have an obvious effect on selection.

Present Position (Table A-7). Teachers comprised about 70% of the elementary institutes applicants, administrators, 23%, and principal-teachers, about 6%.

The teacher group was more heavily weighted among the secondary institutes, the percentages ranging from 82% of the acceptees and 87% of the rejectees of the high level unitary institutes, to 92% of the acceptees and 95% of the rejectees of the low level sequential institutes. Department heads were the next largest category for the secondary institutes, usually making up 4% - 5% of any group.

The position most frequently reported by the college groups, was of course, "professor or instructor," usually about 90% of each group. Department heads, for the most part, made up the balance of the groups.

The most desirable position for the elementary group, in terms of probability of accptance, was that of supervisor. A position as department head enhanced the probability of acceptance to medium level secondary unitary institutes. Except for these two examples, present position was evidently not a factor in selection.

Public or Private School Staff (Table A-72). A large number of applicants failed to respond to this item. Incompleteness of information in reference books on U.S. schools prevented a complete coding. Some generalization may still be made, however.

Public school teachers outnumbered the private school teachers in all groups studied, of course. With the exception of the high level sequential institutes sample, in which private school teachers made up 16% of the acceptees and 12% of the rejectees, these teachers made up from 7% to 10% of the elementary and secondary institute groups. Employment by a private or public institution did not appear to affect selection.

Type of School where Applicant Taught (Table A-73). Most of the secondary institutes seemed to prefer those who were teaching in strictly senior high schools over those in junior high schools or combined junior-senior high schools. These findings were significant for the medium and high unitary and sequential groups. At the low level unitary institutes, however, teachers from combined elementary-junior high-senior high schools had the advantage in selection.

Total Enrollment where Applicant Taught (Table A-74). School sizes ranged from below 50 to 5000. Following are the modal school size intervals for each group.

	Elementary	Sec. Unit. L	Sec. Unit. M	Sec. Unit. H	Male	Female
A	500-999	500-999	1000-2499	1000-2499	1000-2499	1000-2499
R	500-999	500-999	1000-2499	1000-2499	1000-2499	500- 999

	Sec.Seq. L	Sec.Seq. M	Seq. H	Coll. L	Coll. M	Coll. H
A	1000-2499	1000-2499	1000-2499	5000+	500- 999	1000-2499
R	500- 999	1000-2499	1000-2499	1000-2499	1000-2499	1000-2499

Teaching Emphasis (Tables A-75 and A-76). The item, weekly course schedule, was coded to yield information on an applicant's teaching emphases. A subject taught more hours per day than any other subject, (and taught at least 2 hours) was considered the chief teaching emphasis, and the subject taking the next most time was the second teaching emphasis.

The chief teaching emphasis most frequently reported by elementary school teachers was in non-science, non-mathematics subjects, and the second teaching emphasis was usually mathematics.

Mathematics as chief teaching emphasis accounted for a considerable percentage of each secondary group and was especially typical of applicants to high level sequential institutes (A's -- 64.5%, R's -- 62.5%). Two-thirds of the applicants to the low level unitary institutes were about evenly divided between general science and mathematics as chief teaching emphasis, especially in the medium and high level unitary groups.

Among the secondary groups, the largest category for second teaching emphasis, when the listings for "no other subjects" are ignored, is for general science.

The chief teaching emphases of the college groups probably reflect the subject matter of the kinds of institutes available at the various levels. Physics is most often taught among applicants to the low and high level college institutes, and mathematics most often among the medium level college applicants. Chemistry and mathematics teaching are also very prevalent among the high level college applicants.

Second subjects, of course, are infrequently taught by college instructors. Where they were, mathematics was most often observed as the second subject.

An applicant's chief teaching emphasis probably helped decide whether or not he would be accepted. It was advantageous to be concentrating on administration when applying to elementary institutes; biology or chemistry for low level unitary and medium level sequential institutes; general science for low level sequential institutes; chemistry for medium level college institutes; and chemistry or physics for high level college institutes.

Institute Attendance

Rejected applicants to summer institutes in 1964 who had been participants in 1962 or 1963 were not included in the sample of rejectees studied for this report and the institute attendance item was not coded for rejectees who were in the sample who might have been NSF institute participants before 1962. The following chart indicates the percentage of acceptees at each institute level who participated in NSF programs prior to 1964. Included in the counts are participants in the Summer, Academic Year, and In-Service institutes, the Research Participation program, and the NSF Fellowship program.

Percentage of Each Acceptee Group Who Participated in NSF Programs Prior to 1964

	Summer Institutes	Academic Yr. Institutes	In-Service Institutes	Research Participation	NSF Fellowships
Elementary	19.1	1.4	4.5	0.3	0.6
Sec. Unit. L	27.2	1.0	17.5	0.1	0.5
Sec. Unit. M	41.0	1.7	18.7	1.3	1.0
Sec. Unit. H	50.4	4.8	28.8	1.6	0.8
Sec. Seq. L	60.0		20.7	0.7	0.7
Sec. Seq. M	71.0	1.3	27.2	0.8	2.5
Sec. Seq. H	74.5	3.5	27.0	0.5	0.5
College L	39.2	4.0	0.8	0.8	4.0
College M	48.4	6.2	2.2	2.5	1.8
College H	40.3	5.3	2.0	6.8	4.0
Male	43.6	2.2	18.0	1.7	1.0
Female	31.9	0	21.0		0.8

NSF Summer Institutes (Table A-77). Of all the groups, the elementary institutes had the smallest percentage of previous summer institute attendees (19%) and the secondary sequential high level institutes had the highest (74.5%). Approximately 50 to 60% of the college institute acceptees had previously attended summer institutes.

NSF Academic Year Institutes (Table A-78). Previous attendance at academic year institutes on the part of the acceptees in this study was small. From 4% to 6.2% of the college institutes acceptees and from 1% to 5% of the secondary institute acceptees had attended academic year institutes. The unitary and sequential high level groups accounted for the larger proportion of such attendees.

NSF In-Service Institutes (Table A-79). Less than 5% of the elementary institutes acceptees had participated in an in-service institute. From 17% to 29% of the acceptees to secondary institutes had that experience. The unitary high level institutes showed the highest percentage for previous in-service attendance. Few individuals among the acceptees to college institutes had previously attended in-service institutes.

NSF Research Participation (Table A-80). Usually no more than 1% of any group had taken part in the Research Participation program. Exceptions were the medium and high level college groups who showed 2.5% and 6.8% of their acceptees respectively as previous NSF research participants.

NSF Fellowships (Table A-81). Acceptees who had previously obtained NSF fellowships usually comprised 1% or less of the elementary and secondary institute groups. An exception was the 2.5% of acceptees to the medium level sequential institutes who had had fellowships. Fellowships, slightly more common among the college institute groups, had been obtained by 4% of the acceptees at each the low and high levels.

Total NSF Program Participations (Table A-82).

NSF Program Participation Prior to 1964
(All Types)

Sample	None % Acceptees	One % Acceptees	Two % Acceptees	Three or more % Acceptees
Elementary	76.1	19.6	3.0	1.3
Secondary Unitary L	61.5	23.4	9.9	5.2
Secondary Unitary M	49.3	23.8	15.2	11.6
Secondary Unitary H	34.4	34.4	16.8	14.4
Secondary Sequential L	33.3	28.0	21.3	17.4
Secondary Sequential M	21.0	26.5	25.5	27.1
Secondary Sequential H	20.0	22.0	25.0	33.0
College Low	58.4	17.6	11.2	12.8
College Medium	46.5	30.9	13.8	8.8
College High	51.5	25.2	12.2	11.2
Male	47.0	25.4	15.3	12.4
Female	57.1	18.5	15.1	9.2

Non-NSF Institute Attendance (Table A-83). The percentages of acceptees who had attended non-NSF institutes ranged from 1% (Secondary Sequential High) to 13% (Elementary). Approximately 5% of all the acceptees to secondary institutes and about 8% of acceptees to college institutes had been attendees at non-NSF institutes.

Universities Attended for NSF Institutes

Summer Institutes (Table A-84). The most typical entry was one university attended for summer institutes, but attendance at two or more universities was not unusual.

Universities Attended Prior to 1964
for NSF Summer Institutes

		Number of Universities		
Sample	Per cent at: None	One	Two	Three or More
Elementary	80.9	16.9	2.0	.3
Secondary Unitary L	72.8	21.4	5.3	.6
Secondary Unitary M	59.0	28.8	8.4	3.8
Secondary Unitary H	49.6	36.0	12.0	2.4
Secondary Sequential L	40.0	45.3	14.7	.7
Secondary Sequential M	29.0	52.5	14.8	3.8
Secondary Sequential H	25.5	48.0	22.5	5.0
College Low	60.8	20.8	14.4	4.0
College Medium	51.6	34.2	12.0	2.6
College High	59.7	26.5	9.3	4.5
Male	56.4	30.0	9.9	3.7
Female	68.1	24.4	3.4	4.2

Academic Year Institutes (Table A-85).

Universities Attended Prior to 1964 for Academic Year Institutes

Sample	Per cent at:	None	One
Elementary		98.6	1.3
Secondary Unitary L		99.0	1.0
Secondary Unitary M		98.3	1.7
Secondary Unitary H		95.2	4.8
Secondary Sequential L		100.	
Secondary Sequential M		98.8	1.3
Secondary Sequential H		96.5	3.5
College Low		96.0	4.0
College Medium		93.8	6.2
College High		94.7	5.3
Male		97.8	2.2
Female		100.	

In-Service Institutes (Table A-86).

Universities Attended Prior to 1964 for In-Service Institutes

Sample	Per cent at:	None	One	Two or More
Elementary		95.5	4.5	
Secondary Unitary L		82.5	16.6	.9
Secondary Unitary M		81.3	17.0	1.5
Secondary Unitary H		71.2	26.4	2.4
Secondary Sequential L		79.3	20.7	
Secondary Sequential M		72.8	23.5	3.8
Secondary Sequential H		73.0	25.0	2.0
College Low		99.2	.8	
College Medium		97.8	2.2	
College High		98.0	2.0	
Male		82.0	16.3	1.7
Female		79.0	20.2	.8

Research Participation (Table A-87). The few individuals who had been involved in NSF research participation had largely done so at a single university. One acceptee at a high level secondary unitary institute had attended two universities for NSF research, and four acceptees to high level college institutes had attended two or more universities for NSF research.

NSF Fellowships (Table A-88). Most of the NSF Fellowships were taken at a single university. Four acceptees to secondary institutes and two acceptees to college institutes had attended more than one university for this purpose.

All NSF Programs (Table A-89).

Universities Attended Prior to 1964 for all NSF Programs

Sample	Per cent at:	None	One	Two	Three	Four or More
Elementary		76.1	21.1	2.1	.6	
Secondary Unitary L		61.5	29.0	8.1	1.3	.1
Secondary Unitary M		49.3	31.4	12.4	6.3	.6
Secondary Unitary H		34.4	41.6	16.8	6.4	.8
Secondary Sequential L		33.3	42.7	20.7	3.3	
Secondary Sequential M		21.0	48.0	23.5	6.5	1.0
Secondary Sequential H		20.0	39.0	28.0	9.5	3.5
College Low		58.4	20.0	14.4	6.4	.8
College Medium		46.5	36.0	13.1	4.0	.4
College High		51.5	29.7	11.7	6.5	.7
Male		47.0	33.3	12.6	6.7	.5
Female		57.1	25.2	11.8	5.0	.8

Consecutive Attendances at One University for NSF Programs (Table A-90). The accepted group at sequential institutes would be expected to have a number of individuals who had attended the same university for more than one NSF institute session. Approximately 11% of the acceptees at sequential institutes did attend the same university for 3 or more consecutive NSF sessions. The sequential acceptees were not the only ones, however, to have followed that plan. Some individuals among the elementary and unitary institute acceptees had either participated in scheduled sequential institutes in the past or had organized their own sequences. Attendance at the same university for three or more consecutive sessions was reported by .7% of the elementary group, 2.4% of the secondary unitary groups, and 2.7% of the medium and high college groups.

Professional Interests

Professional Journals Read Regularly (Table A-91). The responses to this question were classified as education journals, science-education journals, special science journals, and general science journals. All combinations of these types were also coded. The chart below indicates how each group is divided into those that read predominantly teaching-oriented journals and those who read predominantly science-oriented journals. The percentages who reported reading a combination of both are not included.

Professional Journals

	Education and/or Science - Education		General Science and/or Special Science	
	% Acceptees	% Rejectees	% Acceptees	% Rejectees
Elementary	61.1	57.5	2.3	4.2
Secondary Unitary L	28.4	29.6	14.0	16.1
Secondary Unitary M	33.5	31.7	11.4	12.6
Secondary Unitary H	19.2	30.4	8.0	12.8
Secondary Sequential L	26.7	27.3	14.0	14.7
Secondary Sequential M	25.3	31.8	11.8	11.8
Secondary Sequential H	41.5	38.0	6.0	8.0
College Low	8.8	11.2	26.4	40.0
College Medium	28.0	34.2	14.9	21.4
College High	10.8	14.8	28.1	41.6

Journal reading, as reported on the application form, either had some effect on selection or was correlated with other factors which did affect selection. There were 10 cases in which journal types distinguished between acceptees and rejectees:

Significantly More Acceptees

Institutes	Journals
Elementary	Education and science-education
Secondary Unitary Medium	Education and science-education
Secondary Sequential Medium	General science and science-education
College Low	Special science and science-education
College Medium	Special science only
College High	Special science, or combinations including special science

Professional Organizations - Type (Table A-92). The largest category of organizational membership for the elementary and secondary groups was usually "education organizations only." Two exceptions were the acceptees at medium level unitary and sequential institutes, for whom education and science-education organizations were most typical. The latter category accounted for the second highest number of memberships within the elementary and the other secondary groups.

The larger proportion of college institute applicants were members either of special science organizations only or of a number of organizations that included special science.

There were a number of cases that indicated that type of professional membership was somehow involved in selection. Belonging to education organizations only seemed to operate against one's chances for acceptance at medium level unitary and sequential institutes, at high level sequential institutes, and at low level college institutes. Almost any combination of memberships that included education organizations seemed to decrease the probability of acceptance at high level college institutes, whereas almost any combination that included special science was favored.

Applicants to low and medium level unitary institutes tended to be favored if they belonged to both education and science-education organizations. Apart from these, when type of organization did affect selection, it was usually in a negative way, revealing a bias against education organizations.

The following chart indicates how each group is divided into those belonging to organizations that are concerned with teaching and those to organizations concerned with science. Those affiliated with both types are not included.

Professional Organizations

	Education and/or Science - Education		General Science and/or Special Science	
	% Acceptees	% Rejectees	% Acceptees	% Rejectees
Elementary	84.7	74.9	.9	1.4
Secondary Unitary L	76.3	74.2	2.1	2.2
Secondary Unitary M	72.9	74.9	1.4	1.7
Secondary Unitary H	68.0	80.0	1.6	.8
Secondary Sequential L	77.3	81.4	3.3	1.3
Secondary Sequential M	71.3	77.3	3.1	1.1
Secondary Sequential H	72.0	78.0	3.0	1.5
College Low	36.8	32.0	17.6	24.0
College Medium	39.7	37.4	15.6	16.0
College High	15.1	27.6	31.5	25.8

Professional Organizations - Geographic Extent (Table A-93). Responses to the organizational membership item were classified as regional, national, or both. With the exception of the low level college institute applicants, who most typically reported membership in national organizations only, the largest category for all the groups studied was "national and regional organizations." The smallest category for these groups was "national organizations only."

Failure to report any membership seemed to increase the chances for rejection in the elementary institutes, and belonging to regional organizations only seemed to increase chances for rejection at medium level unitary and sequential institutes, and at high level secondary sequential and college institutes.

The 1957, 1960, and 1964 Studies of High School Teacher Applicants to NSF Summer Institutes

Comparisons were made of the characteristics of secondary school teacher applicants to NSF Summer Institutes in 1957, 1960, and 1964. Certain data that will be discussed were available only for the 1960 and 1964 groups.

Personal Variables

The 1964 applicants were younger, as a group, than the applicants in 1960. In 1960, age did not appear to be a discriminating factor in selection, but in 1964, the older the applicant (within certain limits, no doubt) the better the chances of acceptance.

The applicant group in 1964 had a smaller average number of dependents than those in 1960. This may explain the fact that number of dependents and allowance requests appeared as a selection factor in 1960 but not in 1964.

Educational Background

Chemistry and physics as undergraduate subjects appeared to become less popular with each year. Although credits in chemistry and physics were advantageous for the applicant in 1964, a significant trend (in the applicant population) was found for these credits to become fewer going from 1957 to 1964. However, where graduate courses were concerned, there was a marked increase from 1957 to 1964 for the accepted group in credits in each of the five sciences, and a decrease in credits in education. Moreover, in 1964, the higher the number of graduate credits in any subject, the greater the likelihood of being accepted. This was not true in 1960. The applicants in 1964 as a group had lower undergraduate and graduate grade-point averages than the 1960 group in all subjects but education and biology, but the trend in selection in all three years was in favor of those with the higher grades, both undergraduate and graduate.

Undergraduate majors in education increased with each succeeding year, while science or mathematics majors decreased, but in all three years selection tended to favor those with a science or mathematics major. A major for the master's degree that was in science or mathematics increased the probability of acceptance in 1957, but choice of graduate major did not appear to influence selection in 1960 or 1964.

The percentage of applicants with the bachelor's as the highest degree earned increased with each year, indicating the wider availability of institutes for those at low preparation levels, and perhaps reflecting the fact that institute directors tended to reject those with previous institute attendance, and hence were reaching a greater number of low-preparation applicants. Where in 1957 it was advantageous to have an advanced degree, the reverse was true in 1960, and an advanced degree had no effect on selection in 1964.

Employment Background

In 1960, type of recent professional activity did not appear to influence selection, but in 1964, to have been teaching mathematics or science was advantageous, while non-science teaching was not.

In 1964, the greater the teaching experience in biology, physics, chemistry, or mathematics, the more probable was acceptance. This was true only for chemistry in 1960.

A distinct trend visible in the three years was that indicating the favoring of applicants whose chief teaching emphasis was chemistry. On the whole, however, the kind of course schedule important to selection varied from year to year.

Full teacher accreditation appeared to be more important in 1964 than in 1960. Fewer applicants with provisional credentials were accepted in 1964 than in 1960, and a permanent credential increased the chances for acceptance in 1964.

Professional Interests

The reading of professional journals that included a special science content journal appeared to be helpful to applicants in 1957 and 1964.

Professional affiliations seemed to have some relationship to selection in 1957, when membership in a combination of organizations that included education and general science was found to be desirable, but they were not a factor in 1964 (if all the 1964 high school teacher applicants are studied as one group). A progression was observed from favoring those with any professional affiliation whether local or national, in 1957 to a bias in favor of membership in both regional and national organizations.

Summary of the Male - Female Study

Applicants to the medium level secondary unitary institutes were separated into male-female groups and their responses to the items on the application form were tabulated accordingly. The sample was composed of 406 male acceptees, 425 male rejectees, 119 female acceptees, and 100 female rejectees.

Within the male sample, acceptees differed significantly from rejectees on many variables. Not surprisingly, these match the results for the secondary unitary medium level institutes very closely. The male applicants comprised close to 80% of that group. Virtually no significant differences between acceptees and rejectees appeared within the female sample. Such differences may have existed, but the small numbers involved in most of the response categories would preclude reliable estimates of their significance.

Personal Variables. The female groups were older, on the average, than their corresponding male groups, but the differences were not statistically reliable. The modal age interval for male acceptees and rejectees and for female acceptees was 26 to 30 years; for female rejectees it was 21 - 25 years.

A significantly larger proportion of the men than of the women in the sample were married, and, on the average, had more dependents and asked for more dependent's allowances than did the women.

Educational Background. The male applicants, on the average, had a higher number of undergraduate and graduate credits in the sciences than did the female applicants. This was particularly true of physics and earth science. On the undergraduate level, the female applicants tended to have more credits in education than did the male.

Of the two groups, the female applicants generally made the higher grades in most of the undergraduate courses. Males and females did not differ significantly in their graduate grades.

The female applicants had held their bachelor's and master's degrees longer, on the average, than had the male applicants. The most typical undergraduate majors for both males and females were first, science or mathematics, and second, education with a science or mathematics emphasis.

Approximately 35% of the male applicants and 29% of the female applicants had attained the master's degree. For those who did, the most typical graduate major was education for the males and science or mathematics for the females.

Professional Background. The male acceptees appeared to have more years of teaching experience than the female acceptees, particularly in earth science, general science, and physics. Female acceptees, however, had more mathematics teaching experience than did the males.

A mathematics teaching background and a mathematics emphasis in the weekly course schedule were more typical than any other for both males and females. Approximately 70% of the male applicants and 74% of the female applicants had taught mathematics. General science teaching was next most typical (Male, 61%; Female, 53%). Earth science teaching accounted for the smallest proportion of both males and females.

Previous Institute Attendance. Fifty-three per cent of the male acceptees and 43% of the female acceptees had participated in one or more NSF programs, usually summer institutes. Attendance at more than one university for NSF programs was reported by about 20% of the male acceptees and 18% of the female acceptees, and two or more consecutive attendances at the same university for NSF programs was reported by approximately 12% of the male acceptees, and 8% of the female acceptees.

Professional Interests. The male and female applicants appeared to be alike in the types of journals read most frequently and the kinds of professional organizations to which they belonged. Education or science-education oriented journals and memberships were the most popular types for both groups.

A Recapitulation

A study was made of the attributes of accepted and rejected applicants to the 1964 NSF Summer Institute for elementary, secondary, and college teachers.

The personal characteristics (age, citizenship, marital status, number of dependents and allowance requests, and city, state, or region of residence of the applicant) did not appear, on the whole, to have carried much weight in the criteria for selection.

In analyzing the various groups on personal variables, a fairly consistent pattern of logical relationships could be observed between age, marital status, and number of dependents. This is particularly true of the applicants to low-preparation-level college institutes. They were the oldest group, had the largest ratio of married to single applicants, and had the highest average number of dependents.

Predictably, educational background data did appear to be involved in selection decisions. A rather consistent finding was that the higher the total number of undergraduate or graduate credits in the various sciences, the greater was the probability of being accepted. Credits in specific sciences also appeared to favor selection in several cases. This was particularly true of chemistry undergraduate credits, and for biology, physics, and earth science graduate credits.

Undergraduate grades seemed to be a strong factor in selection. The acceptees usually had higher grades than the rejectees, and for most of the groups, these differences were statistically reliable.

Graduate grades did not appear as strongly as did undergraduate grades as selection factors, but did indicate the same trend. The better the grades in biology, physics, or mathematics, for several of the groups, the greater the probability of selection.

With respect to major subject for university degrees, it appeared that applicants to secondary and college institutes whose undergraduate preparation emphasized science or mathematics had significantly better chances of being accepted than if their preparation was largely in educational methods. For the most part, major subject for advanced degrees, however, was not a factor in selection.

Although it was noted that at four institutes levels, the higher the degree earned, the more advantageous it was to the applicant, considerable numbers were accepted at all levels with other than the preferred degree.

The professional experience items appeared to carry some weight in selection. Some experience teaching a particular subject (biology, chemistry, physics, earth science, mathematics, or general science) seemed to be considered desirable at several institute levels, the particular subject favored usually differing with each institute level. This fact does not seem to be related to the number of openings for participants at institutes offering the same subject matter (see Table 29, Kind of Institute).

Professional activity during the five years preceding application that was predominantly teaching science or mathematics, generally increased the probability of acceptance at most of the institute levels. As might be expected, such activity was typical of most of the applicants.

The present teaching emphasis of the applicant seemed also to have an effect on selection, but the field favored usually varied among the groups studied. Biology or chemistry schedules were advantageous for applicants to low level unitary and medium level sequential institutes; general science for low level sequential institutes; chemistry for medium level college institutes; and chemistry or physics for high level college institutes.

Full accreditation for teaching was in an applicant's favor in the elementary and three categories of secondary institutes, but lack of any certification, and provisional certification was characteristic of only small proportions of the elementary and secondary groups.

Previous institute attendance can be an explicit reason for rejection. A set of sequential institutes, of course, does not come under that policy. Still, from 28.5% to 65.6% of the acceptees to unitary institutes, and from 41.6% to 53.5% of acceptees to college institutes had participated in one or more NSF programs previously. Some of these individuals may have formed their own sequences of institutes. More than 8% of the acceptees to secondary unitary institutes, for example, had attended the same university for two or more consecutive NSF sessions.

Extracurricular professional interests, such as journal reading and membership in professional organizations seemed to have some relationship to acceptance or rejection. For elementary and secondary teachers, an emphasis on education in these pursuits was acceptable, provided that the slant was toward education in the sciences; for college teachers, an emphasis on special science content was desirable. Not surprisingly, a science or mathematics orientation, whether in educational background, professional activity, or professional interests, was often advantageous, but by and large, except for the educational variables, the acceptees and rejectees did not differ dramatically from each other.

PC-1-8/65-TR (A)

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ATTRIBUTES OF APPLICANTS TO NATIONAL SCIENCE FOUNDATION SUMMER INSTITUTES IN 1964

APPENDIX

PSYCHOMETRICS CONSULTANTS

SE 001 475

A Study of the Attributes of Applicants to National Science Foundation Summer Institutes in 1964

APPENDIX TO THE REPORT

Submitted to
The National Science Foundation
Washington, D. C.

Contract: NSF - C349

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by

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APPENDIX

Preface

The appendix contains tables that show the frequency distributions of each response to each question studied on the NSF Summer Institutes application form. Separate distributions were made for acceptees and rejectees[+] within each sample studied. The samples represented the following groups of applicants to Summer Institutes:

(1) Elementary school teachers
(2) Secondary school teachers, all preparation levels
(3) Secondary school teachers (unitary institutes)

    (a) low preparation level
    (b) medium preparation level
    (c) high preparation level

(4) Secondary school teachers (sequential institutes)

    (a) low preparation level
    (b) medium preparation level
    (c) high preparation level

(5) College teachers

    (a) low preparation level
    (b) medium preparation level
    (c) high preparation level

(6) Male teachers[++]
(7) Female teachers[++]

The differences between acceptee and rejectee mean responses on numerical variables were tested for significance by the z-ratio and the t-test. The differences between proportions of acceptees and rejectees on particular responses for qualitative variables were tested for significance by the chi square test. All significant results have been discussed in the main body of the report, and, where possible, are indicated with

---

[+] The items concerning previous NSF institute attendance were tabulated for the acceptees only. Recent-participant rejectees were not included in the sample.

[++] Taken from the Secondary Unitary Medium sample.

asterisks[+] on the tables in this appendix. Where proportions of acceptees and rejectees differ significantly on a particular response, the asterisks appear between the two relevant frequencies; where mean responses differ, the asterisks appear between the two means.

The tables in this appendix are photo-reduced computer print-outs of the 1964 data. For tables that compare data from 1957, 1960, and 1964, and for tables that compare the means for all the 1964 groupings, see Chapters 2 and 14 respectively, of the main report.

A copy of the application form for 1964 is included at the end of the appendix.

[+] .05 level (*)
.01 level (**)

TABLE A-1

KIND OF INSTITUTE

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ANTHROPOLOGY					6	.2	6	.2					6	1.1	6	1.1				
ASTRONOMY					11	.4	12	.4	11	1.4	12	1.5								
BIOLOGY	26	3.2	18	2.2	346	11.5	367	12.2	57	7.1	48	6.0	79	15.0	74	14.1	49	39.2	51	40.8
CARTOGRAPHY																				
CHEMISTRY					218	7.3	* 171	5.7	40	5.0	35	4.4	47	9.0	37	7.0	10	8.0	4	3.2
EARTH SCIENCE	53	6.6	46	5.8	142	4.7	155	5.2	88	11.0	111	13.9	24	4.6	18	3.4				
ECONOMICS					8	.3	7	.2	8	1.0	7	.9								
ENGINEERING																				
GENERAL SCIENCE	262	32.7	275	34.4	154	5.1	166	5.5	115	14.4	121	15.1								
HIST - PHILOSOPHY OF SCI.			2	.3	6	.2	2	.1												
MATHEMATICS	296	37.0	* 343	42.9	875	29.2	**1029	34.3	163	20.4	*197	24.6	185	35.2	189	36.0	38	30.4	49	39.2
PHYSICS	16	2.0	1	.1	118	3.9	92	3.1	30	3.8	20	2.5	28	5.3	24	4.6				
PSYCHOLOGY					16	.5	21	.7	7	.9	18	2.3	6	1.1	3	.6				
RADIATION BIOLOGY																				
RADIATION IN PHYSICAL SCI																				
RADIOACTIVITY AND NUC SCI					61	2.0	52	1.7	8	1.0	5	.6	30	5.7	31	5.9	7	5.6	5	4.0
REGIONAL SCIENCE																				
TECHNICAL INST. SUBJECTS																				
MULTIPLE FIELDS	147	18.4	* 115	14.4	1017	33.9	**896	29.9	273	34.1	* 226	28.3	104	19.8	127	24.2	15	12.0	9	7.2
SUPERVISORS INSTITUTES					22	.7	23	.8					16	3.0	16	3.0	6	4.8	7	5.6
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

Table A-1 (continued)

KIND OF INSTITUTE

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H				COLLEGE L				COLLEGE M			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ANTHROPOLOGY													23	18.4	** 61	48.8				
ASTRONOMY																				
BIOLOGY	6	4.0	9	6.0	34	8.5	38	9.5	29	14.5	30	15.0								
CARTOGRAPHY																				
CHEMISTRY	5	3.3	4	2.7	65	16.3	** 39	9.8	4	2.0	7	3.5					61	22.2	43	15.6
EARTH SCIENCE	11	7.3	10	6.7	5	1.3	1	.3												
ECONOMICS																	27	9.8	42	15.3
ENGINEERING													69	55.2	** 33	26.4	14	5.1	8	2.9
GENERAL SCIENCE	22	14.7	* 37	24.7																
HIST - PHILOSOPHY OF SCI.																				
MATHEMATICS	31	20.7	30	20.0	112	28.0	**148	37.0	94	47.0	109	54.5					114	41.5	123	44.7
PHYSICS	5	3.3	4	2.7	12	3.0	9	2.3	7	3.5							20	7.3	20	7.3
PSYCHOLOGY															23	18.4				
RADIATION BIOLOGY																				
RADIATION IN PHYSICAL SCI																				
RADIOACTIVITY AND NUC SCI																				
REGIONAL SCIENCE																				
TECHNICAL INST. SUBJECTS													33	26.4	8	6.4	39	14.2	39	14.2
MULTIPLE FIELDS	70	46.7	56	37.3	172	43.1	165	41.3	66	33.0	54	27.0								
SUPERVISORS INSTITUTES																				
TOTALS	150		150		400		400		200		200		125		125		275		275	

Table A-1 (continued)

KIND OF INSTITUTE

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ANTHROPOLOGY	23	18.4 **	76	60.8									5	1.2	5	1.2	1	.8	1	1.0
ASTRONOMY																				
BIOLOGY									99	16.5	108	18.0	62	15.3	58	13.6	17	14.3	16	16.0
CARTOGRAPHY									13	2.2	23	3.8								
CHEMISTRY					61	22.2 *	43	15.6	106	17.7 **	67	11.2	40	9.9	29	6.8	7	5.9	8	8.0
EARTH SCIENCE											23	3.8	22	5.4	15	3.5	2	1.7	3	3.0
ECONOMICS					27	9.8 *	42	15.3												
ENGINEERING	69	55.2 **	40	32.0	14	5.1	8	2.9	93	15.5 **	56	9.3								
GENERAL SCIENCE																				
HIST - PHILOSOPHY OF SCI.									16	2.7	40	6.7								
MATHEMATICS					114	41.5	123	44.7	99	16.5 **	198	33.0	130	32.0	150	35.3	55	46.2	39	39.0
PHYSICS					20	7.3	20	7.3	49	8.2	20	3.3	25	6.2	24	5.6	3	2.5		
PSYCHOLOGY									25	4.2	22	3.7	5	1.2	3	.7	1	.8		
RADIATION BIOLOGY									12	2.0	1	.2								
RADIATION IN PHYSICAL SCI									64	10.7 **	29	4.8								
RADIOACTIVITY AND NUC SCI													23	5.7	26	6.1	7	5.9	5	5.0
REGIONAL SCIENCE									24	4.0	13	2.2								
TECHNICAL INST. SUBJECTS	33	26.4	9	7.2	39	14.2	39	14.2												
MULTIPLE FIELDS													79	19.5	99	23.3	25	21.0	28	28.0
SUPERVISORS INSTITUTES													15	3.7	16	3.8	1	.8		
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-2

MALE OR FEMALE APPLICANT

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY																				
MALE	457	57.1	475	59.4	2370	79.0	2487	82.9	630	78.8	**673	84.1	406	77.3	425	81.0	103	82.4	111	88.8
FEMALE	343	42.9	325	40.6	630	21.0	513	17.1	170	21.2	127	15.9	119	22.7	100	19.0	22	17.6	14	11.2
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY												
MALE	119	79.3	119	79.3	334	83.5	339	84.8	159	79.5	173	86.5
FEMALE	31	20.7	31	20.7	66	16.5	61	15.3	41	20.5	27	13.5
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY																				
MALE	119	95.2	112	89.6	250	90.9	241	87.6	537	89.5	530	88.3	406	100	425	100				
FEMALE	6	4.8	13	10.4	25	9.1	34	12.4	63	10.5	70	11.7					119	100	100	100
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-3

AGE IN 1964

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
66 - 70					1		2	.1			1	.1								
61 - 65			6	.8	10	.3	14	.5	4	.5	8	1.0	3	.6	5	1.0				
56 - 60	14	1.8	44	5.5	56	1.9	71	2.4	21	2.6	21	2.6	9	1.7	20	3.8	2	1.6	2	1.6
51 - 55	54	6.8	51	6.4	124	4.1	107	3.6	37	4.6	35	4.4	35	6.7	20	3.8	4	3.2	5	4.0
46 - 50	89	11.1	86	10.8	182	6.1	152	5.1	55	6.9	56	7.0	33	6.3	25	4.8	6	4.8	5	4.0
41 - 45	118	14.8	120	15.0	256	8.5	247	8.2	73	9.1	72	9.0	43	8.2	45	8.6	9	7.2	6	4.8
36 - 40	181	22.6	157	19.6	456	15.2	375	12.5	118	14.8	100	12.5	89	17.0	61	11.6	17	13.6	21	16.8
31 - 35	187	23.4	165	20.6	691	23.0	537	17.9	192	24.0	164	20.5	103	19.6	98	18.7	35	28.0	22	17.6
26 - 30	124	15.5	125	15.6	881	29.4	843	28.1	218	27.3	200	25.0	155	29.5	142	27.0	42	33.6	31	24.8
21 - 25	27	3.4	35	4.4	326	10.9	621	20.7	77	9.6	134	16.8	50	9.5	103	19.6	10	8.0	30	24.0
UNDER 21	1	.1			1		3	.1	1	.1	2	.3			1	.2				
NO ENTRY	5	.6	11	1.4	16	.5	28	.9	4	.5	7	.9	5	1.0	5	1.0			3	2.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	37.97		38.83		34.37	**	33.19		35.08		34.50		35.13	*	33.82		33.68		32.47	
STANDARD DEVIATIONS	8.17		9.31		8.62		9.25		8.97		9.71		9.07		9.84		7.75		8.70	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
66 - 70							1	.3				
61 - 65					1	.3						
56 - 60	2	1.3	3	2.0	2	.5	4	1.0			1	.5
51 - 55	3	2.0	6	4.0	11	2.8	12	3.0	2	1.0	8	4.0
46 - 50	9	6.0	6	4.0	18	4.5	13	3.3	7	3.5	9	4.5
41 - 45	16	10.7	10	6.7	34	8.5	38	9.5	9	4.5	10	5.0
36 - 40	27	18.0	27	18.0	59	14.8	42	10.5	22	11.0	18	9.0
31 - 35	40	26.7	25	16.7	108	27.0	57	14.3	54	27.0	34	17.0
26 - 30	44	29.3	41	27.3	119	29.8	128	32.0	70	35.0	71	35.5
21 - 25	8	5.3	31	20.7	47	11.8	102	25.5	36	18.0	49	24.5
UNDER 21												
NO ENTRY	1	.7	1	.7	1	.3	3	.8				
TOTALS	150		150		400		400		200		200	
MEANS	34.61		33.03		33.35	**	31.74		31.18		31.33	
STANDARD DEVIATIONS	7.45		8.76		7.61		8.56		6.52		8.19	

Table A-3 (continued)

AGE IN 1964

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
66 - 70			2	1.6					1	.2	1	.2								
61 - 65			2	1.6	3	1.1	2	.7	2	.3	8	1.3	2	.5	4	.9	1	.8	1	1.0
56 - 60	1	.8	6	4.8	10	3.6	21	7.6	19	3.2	34	5.7	5	1.2	11	2.6	4	3.4	9	9.0
51 - 55	9	7.2	12	9.6	18	6.5	13	4.7	32	5.3	35	5.8	19	4.7	17	4.0	16	13.4	3	3.0
46 - 50	22	17.6	11	8.8	21	7.6	29	10.5	53	8.8	51	8.5	22	5.4	18	4.2	11	9.2	7	7.0
41 - 45	30	24.0	16	12.8	39	14.2	34	12.4	87	14.5	72	12.0	36	8.9	36	8.5	7	5.9	9	9.0
36 - 40	22	17.6	29	23.2	61	22.2	48	17.5	101	16.8	111	18.5	71	17.5	48	11.3	18	15.1	13	13.0
31 - 35	25	20.0	29	23.2	64	23.3	59	21.5	163	27.2	126	21.0	91	22.4	86	20.2	12	10.1	12	12.0
26 - 30	13	10.4	13	10.4	48	17.5	54	19.6	123	20.5	108	18.0	127	31.3	124	29.2	28	23.5	18	18.0
21 - 25	2	1.6	5	4.0	9	3.3	13	4.7	17	2.8	46	7.7	29	7.1	78	18.4	21	17.6	25	25.0
UNDER 21																			1	1.0
NO ENTRY	1	.8			2	.7	2	.7	2	.3	8	1.3	4	1.0	3	.7	1	.8	2	2.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	39.62		40.00		37.78		38.07		37.22		37.34		34.36		33.25		36.29		34.56	
STANDARD DEVIATIONS	8.42		9.92		9.40		10.27		8.86		10.79		8.95		9.73		11.60		12.48	

TABLE A-4

U.S. CITIZEN

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	24	3.0	43	5.4	85	2.8	101	3.4	27	3.4	24	3.0	17	3.2	19	3.6	5	4.0	4	3.2
YES	771	96.4	753	94.1	2900	96.7	2885	96.2	772	96.5	774	96.8	506	96.4	503	95.8	119	95.2	120	96.0
NO	5	.6	4	.5	15	.5	14	.5	1	.1	2	.3	2	.4	3	.6	1	.8	1	.8
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY ACCEPTED		SEQUEN. L REJECTED		SECONDARY ACCEPTED		SEQUEN. M REJECTED		SECONDARY ACCEPTED		SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	7	4.7	4	2.7	10	2.5	16	4.0	4	2.0	2	1.0
YES	143	95.3	146	97.3	386	96.5	381	95.3	195	97.5	197	98.5
NO					4	1.0	3	.8	1	.5	1	.5
TOTALS	150		150		400		400		200		200	

	COLLEGE L ACCEPTED		COLLEGE L REJECTED		COLLEGE M ACCEPTED		COLLEGE M REJECTED		COLLEGE H ACCEPTED		COLLEGE H REJECTED		MALE ACCEPTED		MALE REJECTED		FEMALE ACCEPTED		FEMALE REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	2	1.6	1	.8	5	1.8	6	2.2	9	1.5	12	2.0	16	3.9	16	3.8	1	.8	3	3.0
YES	117	93.6	116	92.8	259	94.2	255	92.7	554	92.3	542	90.3	388	95.6	407	95.8	118	99.2	96	96.0
NO	6	4.8	8	6.4	11	4.0	14	5.1	37	6.2	46	7.7	2	.5	2	.5			1	1.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

MARITAL STATUS

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	7	.9	9	1.1	7	.2	15	.5	2	.3	3	.4	2	.4	1	.2			1	.8
SINGLE	160	20.0	132	16.5	648	21.6	683	22.8	156	19.5	152	19.0	117	22.3	136	25.9	22	17.6	22	17.6
MARRIED	573	71.6	594	74.3	2249	75.0	2216	73.9	608	76.0	625	78.1	390	74.3	377	71.8	101	80.8	100	80.0
WIDOW OR WIDOWER	20	2.5	24	3.0	27	.9	24	.8	10	1.3	7	.9	5	1.0	2	.4				
DIVORCED OR SEPARATED	40	5.0	41	5.1	69	2.3	62	2.1	24	3.0	13	1.6	11	2.1	9	1.7	2	1.6	2	1.6
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	2	1.3	4	2.7							4	2.0
SINGLE	27	18.0	35	23.3	99	24.8	107	26.8	57	28.5	46	23.0
MARRIED	111	74.0	103	68.7	292	73.0	282	70.5	139	69.5	146	73.0
WIDOW OR WIDOWER	3	2.0	2	1.3	2	.5	4	1.0	2	1.0	1	.5
DIVORCED OR SEPARATED	7	4.7	6	4.0	7	1.8	7	1.8	2	1.0	3	1.5
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY			1	.8			1	.4			4	.7	1	.2	1	.2	1	.8		
SINGLE	12	9.6	14	11.2	37	13.5	54	19.6	110	18.3	119	19.8	53	13.1	74	17.4	64	53.8	62	62.0
MARRIED	110	88.0	108	86.4	232	84.4	212	77.1	477	79.5	463	77.2	345	85.0	344	8[illegible].9	45	37.8	33	33.0
WIDOW OR WIDOWER	2	1.6	1	.8	4	1.5	3	1.1	6	1.0	9	1.5	2	.5	2	.5	3	2.5		
DIVORCED OR SEPARATED	1	.8	1	.8	2	.7	5	1.8	7	1.2	5	.8	5	1.2	4	.9	6	5.0	5	5.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-6

NUMBER OF DEPENDENTS

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	246	30.8	213	26.6	889	29.6	905	30.2	218	27.3	211	26.4	160	30.5	159	30.3	40	32.0	40	32.0
ONE	105	13.1	120	15.0	304	10.1	376	12.5	100	12.5	104	13.0	48	9.1	76	14.5	14	11.2	11	8.8
TWO	125	15.6	127	15.9	513	17.1	552	18.4	153	19.1	156	19.5	94	17.9	93	17.7	24	19.2	19	15.2
THREE	127	15.9	138	17.3	630	21.0	575	19.2	166	20.8	174	21.8	112	21.3	87	16.5	22	17.6	24	19.2
FOUR	116	14.5	133	16.6	429	14.3	380	12.7	109	13.6	104	13.0	76	14.5	72	13.7	18	14.4	23	18.4
FIVE	54	6.8	42	5.3	158	5.3	135	4.5	36	4.5	29	3.6	24	4.6	28	5.3	4	3.2	3	2.4
SIX	20	2.5	23	2.9	58	1.9	59	2.0	12	1.5	16	2.0	10	1.9	8	1.5	2	1.6	5	4.0
SEVEN	5	.6	3	.4	14	.5	14	.5	5	.6	5	.6	1	.2			1	.8		
EIGHT OR MORE	2	.3	1	.1	5	.2	4	.1	1	.1	1	.1			2	.4				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	37	24.7	41	27.3	124	31.0	136	34.0	72	36.0	63	31.5
ONE	13	8.7	22	14.7	43	10.8	37	9.3	15	7.5	23	11.5
TWO	30	20.0	24	16.0	51	12.8	77	19.3	28	14.0	36	18.0
THREE	24	16.0	31	20.7	89	22.3	70	17.5	42	21.0	42	21.0
FOUR	30	20.0	16	10.7	55	13.8	49	12.3	24	12.0	22	11.0
FIVE	11	7.3	10	6.7	25	6.3	18	4.5	15	7.5	10	5.0
SIX	2	1.3	6	4.0	9	2.3	10	2.5	4	2.0	3	1.5
SEVEN	1	.7			4	1.0	3	.8			1	.5
EIGHT OR MORE	2	1.3										
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	16	12.8	18	14.4	51	18.5	70+	25.5	136	22.7	151	25.2	83	20.4	92	21.6	77	64.7	67	67.0
ONE	14	11.2	20	16.0	38	13.8	37	13.5	62	10.3	71	11.8	33	8.1	59	13.9	15	12.6	17	17.0
TWO	22	17.6	23	18.4	39	14.2	36	13.1	114	19.0	85	14.2	79	19.5	85	20.0	15	12.6	8	8.0
THREE	31	24.8	27	21.6	73	26.5	61	22.2	141	23.5	133	22.2	101	24.9	86	20.2	11	9.2	1	1.0
FOUR	25	20.0	20	16.0	52	18.9	44	16.0	99	16.5	99	16.5	76	18.7	67	15.8			5	5.0
FIVE	10	8.0	11	8.8	11	4.0	17	6.2	35	5.8	40	6.7	23	5.7	26	6.1	1	.8	2	2.0
SIX	7	5.6	5	4.0	8	2.9	8	2.9	11	1.8	15	2.5	10	2.5	8	1.9				
SEVEN					2	.7	2	.7	2	.3	5	.8	1	.2						
EIGHT OR MORE			1	.8	1	.4					1	.2			2	.5				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-7

NUMBER OF DEPENDENCY ALLOWANCES

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	259	32.4	235	29.4	911	30.4	912	30.4	225	28.1	204	25.5	163	31.0	165	31.4	40	32.0	42	33.6
ONE	111	13.9	121	15.1	308	10.3	378	12.6	99	12.4	113	14.1	49	9.3	71	13.5	14	11.2	10	8.0
TWO	122	15.3	124	15.5	508	16.9	552	18.4	152	19.0	152	19.0	93	17.7	97	18.5	24	19.2	19	15.2
THREE	125	15.6	129	16.1	623	20.8	576	19.2	167	20.9	173	21.6	109	20.8	87	16.6	22	17.6	25	20.0
FOUR	183	22.9	191	23.9	650	21.7	582	19.4	157	19.6	158	19.8	111	21.1	105	20.0	25	20.0	29	23.2
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	35	23.3	42	28.0	129	32.3	138	34.5	71	35.5	63	31.5
ONE	16	10.7	22	14.7	43	10.8	35	8.8	15	7.5	24	12.0
TWO	28	18.7	23	15.3	52	13.0	79	19.8	27	13.5	37	18.5
THREE	24	16.0	34	22.7	88	22.0	69	17.3	42	21.0	41	20.5
FOUR	47	31.3	29	19.3	88	22.0	79	19.8	45	22.5	35	17.5
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	16	12.8	19	15.2	54	19.6	78	28.4	138	23.0	161	26.8	85	20.9	95	22.4	78	65.5	70	70.0
ONE	14	11.2	18	14.4	37	13.5	34	12.4	66	11.0	67	11.2	32	7.9	56	13.2	17	14.3	15	15.0
TWO	22	17.6	25	20.0	39	14.2	38	13.8	114	19.0	81	13.5	78	19.2	89	20.9	15	12.6	8	8.0
THREE	31	24.8	28	22.4	71	25.8	58	21.1	131	21.8	131	21.8	101	24.9	87	20.5	8	6.7		
FOUR	42	33.6	35	28.0	74	26.9	67	24.4	151	25.2	160	26.7	110	27.1	98	23.1	1	.8	7	7.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-8

CITY WHERE APPLICANT TEACHES

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
BALTIMORE	5	.6	3	.4	20	.7	20	.7	3	.4	3	.4	7	1.3	4	.8	2	1.6		
BOSTON	1	.1			5	.2							2	.4						
BUFFALO	4	.5			2	.1	8	.3	1	.1	1	.1			3	.6				
CHICAGO	4	.5	5	.6	20	.7	12	.4	5	.6	1	.1	2	.4	3	.6	2	1.6	2	1.6
CINCINNATI	2	.3	3	.4	17	.6	5	.2	6	.8			2	.4	1	.2				
CLEVELAND	3	.4	3	.4	10	.3	11	.4	1	.1			2	.4	4	.8				
DALLAS	1	.1	4	.5	10	.3	6	.2	3	.4	2	.3	3	.6						
DETROIT	2	.3	12	1.5	19	.6	7	.2	2	.3	2	.3	5	1.0	1	.2			2	1.6
HOUSTON	2	.3	1	.1	4	.1	11	.4	2	.3	3	.4			6	1.1				
LOS ANGELES	1	.1	1	.1	7	.2	11	.4			3	.4	4	.8	2	.4				
MILWAUKEE	4	.5	6	.8	15	.5	5	.2	2	.3	2	.3	1	.2	3	.6	1	.8		
NEW ORLEANS	3	.4	4	.5	7	.2	12	.4			2	.3			4	.8	1	.8		
NEW YORK	19	2.4	2	.3	29	1.0	34	1.1	5	.6	11	1.4	7	1.3	5	1.0	1	.8		
PHILADELPHIA	5	.6	1	.1	23	.8	1[illegible]	.6	3	.4	2	.3	3	.6	4	.8			1	.8
PITTSBURGH	2	.3	1	.1	14	.5	18	.6	6	.8	2	.3	2	.4	5	1.0			1	.8
SAN ANTONIO					6	.2	6	.2	1	.1	1	.1	2	.4	5	1.0				
SAN DIEGO			4	.5	4	.1	4	.1	1	.1	1	.1			1	.2				
SEATTLE	4	.5	6	.8	10	.3	8	.3	2	.3			2	.4	2	.4			1	.8
ST.LOUIS	2	.3	7	.9	20	.7	12	.4	4	.5	3	.4	5	1.0	6	1.1	2	1.6		
SAN FRANCISCO	1	.1	3	.4	17	.6	1		10	1.3			1	.2						
WASHINGTON DC	2	.3			2	.1	3	.1	1	.1										
AKRON	1	.1	3	.4	2	.1	3	.1							1	.2				
ATLANTA					14	.5	12	.4	4	.5	5	.6	2	.4	2	.4			1	.8
BIRMINGHAM	4	.5	3	.4	8	.3	14	.5			5	.6	2	.4	3	.6			3	2.4
COLUMBUS			2	.3	6	.2	3	.1	2	.3	1	.1	1	.2						
DAYTON			2	.3	6	.2	3	.1	1	.1										
DENVER	3	.4	3	.4	6	.2	5	.2	3	.4	2	.3	2	.4						
EL PASO					5	.2	1		1	.1	1	.1								
FORT WORTH	1	.1	1	.1	4	.1	8	.3	2	.3	5	.6			2	.4			1	.8
HONOLULU	10	1.3	3	.4	13	.4	1		12	1.5	1	.1	1	.2						
INDIANAPOLIS	3	.4	3	.4	10	.3	8	.3	3	.4	1	.1	2	.4	1	.2				
JERSEY CITY	1	.1			1															
KANSAS CITY, MO			2	.3	4	.1	3	.1	1	.1			2	.4	1	.2				
LONG BEACH CALIF					3	.1	1		1	.1					1	.2				
LOUISVILLE	2	.3	1	.1	7	.2	2	.1			1	.1	1	.2						
MEMPHIS	1	.1	1	.1	6	.2	7	.2	2	.3	2	.3	2	.4	1	.2				
MIAMI	7	.9	3	.4	4	.1	20	.7	1	.1	5	.6	1	.2	3	.6			1	.8
MINNEAPOLIS	5	.6	12	1.5	12	.4	9	.3	5	.6	1	.1	1	.2	1	.2			2	1.6
NEWARK					3	.1	2	.1	1	.1	1	.1								
NORFOLK	2	.3			1		5	.2			1	.1			1	.2				
OAKLAND, CALIF			2	.3	5	.2	10	.3			4	.5	4	.8	3	.6				
OKLAHOMA CITY	1	.1	1	.1	6	.2	2	.1	1	.1			2	.4			1	.8		
OMAHA					8	.3	3	.1					1	.2						
PHOENIX	3	.4	2	.3	15	.5	10	.3	5	.6	1	.1	1	.2	2	.4	2	1.6		
PORTLAND ORE.	5	.6	1	.1	5	.2	5	.2	3	.4	1	.1								
ROCHESTER N.Y.					3	.1	6	.2					1	.2	1	.2			1	.8
TAMPA					5	.2	8	.3	2	.3	3	.4	3	.6	1	.2			2	1.6
TOLEDO	1	.1			1		1													
TULSA	1	.1	1	.1	4	.1	3	.1	1	.1	1	.1	1	.2					2	1.6
ST. PAUL	1	.1	1	.1	7	.2	7	.2	1	.1									2	1.6
WICHITA			6	.8	9	.3	3	.1	3	.4										
POPULATIONS UNDER 250,000	631	85.1	681	85.1	2556	85.2*	2622	87.4	687	85.9*	719	89.9	445	84.8	442	84.2	113	90.4	103	82.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

Table A-8 (continued)

CITY WHERE APPLICANT TEACHES

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H				COLLEGE L				COLLEGE M			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
BALTIMORE	1	.7	1	.7			2	.5	1	.5							1	.4		
BOSTON					1	.3													1	.4
BUFFALO			1	.7			1	.3	1	.5	1	.5							1	.4
CHICAGO			2	1.3	1	.3	2	.5	2	1.0	1	.5					1	.4	4	1.5
CINCINNATI	1	.7	1	.7	3	.8	1	.3			1	.5			1	.8	1	.4	1	.4
CLEVELAND	1	.7			2	.5	3	.8	2	1.0	2	1.0			1	.8			1	.4
DALLAS							2	.5	2	1.0							1	.4		
DETROIT	1	.7	1	.7	4	1.0	1	.3					2	1.6						
HOUSTON					1	.3											3	1.1		
LOS ANGELES			2	1.3	1	.3	1	.3					2	1.6			1	.4		
MILWAUKEE					3	.8			3	1.5			2	1.6					1	.4
NEW ORLEANS			2	1.3	1	.3			2	1.0	2	1.0								
NEW YORK	2	1.3			4	1.0	5	1.3	2	1.0					2	1.6	3	1.1	4	1.5
PHILADELPHIA	1	.7	2	1.3	4	1.0	3	.8			2	1.0	1	.8	1	.8	1	.4	1	.4
PITTSBURGH			1	.7	2	.5	1	.3	2	1.0	1	.5								
SAN ANTONIO					2	.5											1	.4	1	.4
SAN DIEGO					1	.3					1	.5			2	1.6				
SEATTLE	2	1.3	1	.7	1	.3	1	.3	1	.5					3	2.4			1	.4
ST.LOUIS					2	.5	2	.5	3	1.5			1	.8					1	.4
SAN FRANCISCO					3	.8			1	.5			1	.8						
WASHINGTON DC											3	1.5					1	.4		
AKRON					2	.5	1	.3												
ATLANTA					6	1.5	2	.5							1	.8				
BIRMINGHAM	2	1.3					1	.3												
COLUMBUS									2	1.0	1	.5	1	.8	1	.8	1	.4		
DAYTON	2	1.3	1	.7	2	.5	2	.5					1	.8	1	.8	1	.4	1	.4
DENVER							2	.5	1	.5										
EL PASO					1	.3			1	.5			1	.8						
FORT WORTH					1	.3			1	.5										
HONOLULU																				
INDIANAPOLIS					1	.3	1	.3	2	1.0	1	.5								
JERSEY CITY									1	.5							1	.4		
KANSAS CITY, MO									1	.5	2	1.0							1	.4
LONG BEACH CALIF					2	.5							2	1.6	1	.8				
LOUISVILLE					4	1.0			1	.5							1	.4		
MEMPHIS					1	.3					1	.5					1	.4	1	.4
MIAMI							3	.8			1	.5	2	1.6	1	.8	2	.7	1	.4
MINNEAPOLIS					2	.5	2	.5	1	.5	1	.5					1	.4		
NEWARK									1	.5					2	1.6				
NORFOLK					1	.3					2	1.0			1	.8			1	.4
OAKLAND, CALIF							2	.5												
OKLAHOMA CITY							1	.3	1	.5	1	.5					1	.4	1	.4
OMAHA					1	.3	2	.5	1	.5	1	.5								
PHOENIX	1	.7	1	.7	4	1.0	3	.8							3	2.4	1	.4	3	1.1
PORTLAND ORE.	1	.7	1	.7					1	.5					1	.8				
ROCHESTER N.Y.							2	.5	1	.5	1	.5					1	.4	1	.4
TAMPA																				
TOLEDO			1	.7	1	.3														
TULSA																				
ST. PAUL					2	.5					1	.5	1	.8						
WICHITA	1	.7			1	.3	1	.3	2	1.0										
POPULATIONS UNDER 250,000	134	89.3	132	88.0	332	83.0	350	87.5	160	80.0	173	86.5	108	86.4	103	82.4	250	90.9	248	90.2
TOTALS	150		150		400		400		200		200		125		125		275		275	

Table A-8 (continued)

CITY WHERE APPLICANT TEACHES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
BALTIMORE					1	.4			1	.2	4	.7	4	1.0	4	.9	3	2.5		
BOSTON							1	.4	3	.5			2	.5						
BUFFALO							1	.4	2	.3	1	.2			3	.7				
CHICAGO					1	.4	4	1.5	2	.3	6	1.0	1	.2	2	.5	1	.8	1	1.0
CINCINNATI			1	.8	1	.4	1	.4	1	.2	1	.2	2	.5	1	.2				
CLEVELAND			1	.8			1	.4	1	.2	2	.3	2	.5					4	4.0
DALLAS					1	.4							2	.5			1	.8		
DETROIT	2	1.6									2	.3	5	1.2	1	.2				
HOUSTON					3	1.1			2	.3					3	.7			3	3.0
LOS ANGELES	2	1.6			1	.4			4	.7	2	.3	4	1.0	1	.2			1	1.0
MILWAUKEE	2	1.6					1	.4	5	.8	4	.7	1	.2	1	.2			2	2.0
NEW ORLEANS									2	.3	2	.3			1	.2			3	3.0
NEW YORK			3	2.4	3	1.1	4	1.5	8	1.3	10	1.7	4	1.0	3	.7	3	2.5	2	2.0
PHILADELPHIA	1	.8	1	.8	1	.4	1	.4	4	.7	4	.7	3	.7	3	.7			1	1.0
PITTSBURGH									1	.2	2	.3	1	.2	5	1.2	1	.8		
SAN ANTONIO					1	.4	1	.4	2	.3	2	.3	1	.2	4	.9	1	.8	1	1.0
SAN DIEGO			2	1.6					1	.2	2	.3			1	.2				
SEATTLE			3	2.4			1	.4	1	.2	2	.3	2	.5	2	.5				
ST.LOUIS	1	.8					1	.4	1	.2	2	.3	2	.5	6	1.4	3	2.5		
SAN FRANCISCO	1	.8							2	.3	1	.2					1	.8		
WASHINGTON DC					1	.4			1	.2										
AKRON									1	.2	1	.2			1	.2				
ATLANTA			1	.8					1	.2	1	.2			2	.5	2	1.7		
BIRMINGHAM											3	.5			1	.2	2	1.7	2	2.0
COLUMBUS	1	.8	1	.8	1	.4			4	.7	1	.2	1	.2						
DAYTON	1	.8	1	.8	1	.4	1	.4	1	.2										
DENVER													2	.5						
EL PASO	1	.8							1	.2										
FORT WORTH											1	.2			1	.2			1	1.0
HONOLULU											1	.2					1	.8		
INDIANAPOLIS													2	.5	1	.2				
JERSEY CITY					1	.4			3	.5										
KANSAS CITY, MO							1	.4	1	.2	1	.2	1	.2	1	.2	1	.8		
LONG BEACH CALIF	2	1.6	1	.8					2	.3					1	.2				
LOUISVILLE					1	.4			1	.2	1	.2	1	.2						
MEMPHIS					1	.4	1	.4	2	.3	1	.2	2	.5	1	.2				
MIAMI	2	1.6	1	.8	2	.7	1	.4			1	.2			3	.7	1	.8		
MINNEAPOLIS			1	.8	1	.4					2	.3	1	.2	1	.2				
NEWARK			2	1.6					1	.2										
NORFOLK			1	.8			1	.4	1	.2	1	.2							1	1.0
OAKLAND, CALIF													3	.7	2	.5	1	.8	1	1.0
OKLAHOMA CITY					1	.4	1	.4	2	.3	2	.3	1	.2			1	.8		
OMAHA									1	.2	1	.2					1	.8		
PHOENIX			3	2.4	1	.4	3	1.1	2	.3	5	.8	1	.2	2	.5				
PORTLAND ORE.			1	.8					2	.3	2	.3								
ROCHESTER N.Y.					1	.4	1	.4	3	.5	2	.3	1	.2	1	.2				
TAMPA									1	.2	1	.2	3	.7	1	.2				
TOLEDO									2	.3	3	.5								
TULSA											1	.2	1	.2						
ST. PAUL	1	.8									1	.2								
WICHITA									3	.5										
POPULATIONS UNDER 250,000	108	86.4	101	80.8	250	90.9	248	90.2	521	86.8	518	86.3	350	86.2	365	85.9	95	79.8	77	77.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

STATE WHERE APPLICANT TEACHES

TABLE A-9

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY COMBINED ACCEPTED		SECONDARY COMBINED REJECTED		SECONDARY UNITARY L ACCEPTED		SECONDARY UNITARY L REJECTED		SECONDARY UNITARY M ACCEPTED		SECONDARY UNITARY M REJECTED		SECONDARY UNITARY H ACCEPTED		SECONDARY UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ALABAMA	19	2.4	18	2.3	63	2.1	77	2.6	17	2.1	24	3.0	13	2.5	12	2.3	3	2.4	3	2.4
ALASKA	1	.1	1	.1	4	.1	3	.1			1	.1								
ARIZONA	13	1.6	11	1.4	38	1.3	28	.9	13	1.6	8	1.0	3	.6	3	.6	3	2.4	1	.8
ARKANSAS	10	1.3	18	2.3	28	.9	38	1.3	7	.9	10	1.3	4	.8	5	1.0			2	1.6
CALIFORNIA	35	4.4	44	5.5	182	6.1	183	6.1	59	7.4	53	6.6	35	6.7	34	6.5	1	.8	6	4.8
COLORADO	16	2.0	16	2.0	33	1.1	42	1.4	9	1.1	9	1.1	12	2.3	5	1.0			2	1.6
CONNECTICUT	6	.8	1	.1	31	1.0	28	.9	8	1.0	7	.9	5	1.0	8	1.5			2	1.6
DELAWARE			3	.4	9	.3	12	.4	3	.4	3	.4	1	.2	1	.2	1	.8	1	.8
DISTRICT OF COLUMBIA	2	.3	1	.1	5	.2	7	.2	2	.3	1	.1	2	.4	2	.4				
FLORIDA	26	3.3	21	2.6	96	3.2	116	3.9	36	4.5	33	4.1	21	4.0	20	3.8	4	3.2	8	6.4
GEORGIA	4	.5	5	.6	51	1.7	66	2.2	22	2.8	27	3.4	6	1.1	9	1.7	1	.8	3	2.4
HAWAII	25	3.1	6	.8	24	.8	3	.1	21	2.6	3	.4	1	.2						
IDAHO	5	.6	6	.8	14	.5	10	.3	4	.5	5	.6			1	.2			1	.8
ILLINOIS	23	2.9 *	39	4.9	165	5.5 **	119	4.0	36	4.5	28	3.5	29	5.5	22	4.2	15	12.0	8	6.4
INDIANA	26	3.3	18	2.3	67	2.2	69	2.3	15	1.9	17	2.1	11	2.1	7	1.3	4	3.2	4	3.2
IOWA	14	1.8 **	36	4.5	68	2.3	80	2.7	15	1.9	16	2.0	12	2.3	12	2.3	3	2.4	2	1.6
KANSAS	14	1.8 *	28	3.5	55	1.8	55	1.8	5	.6	10	1.3	12	2.3	9	1.7	1	.8	1	.8
KENTUCKY	7	.9	6	.8	39	1.3	26	.9	18	2.3	6	.8	3	.6	5	1.0				
LOUISIANA	20	2.5	28	3.5	40	1.3 **	67	2.2	4	.5	17	2.1	10	1.9	17	3.2			1	.8
MAINE	4	.5			19	.6	19	.6	8	1.0	3	.4	3	.6	5	1.0			1	.8
MARYLAND	14	1.8	6	.8	45	1.5	57	1.9	8	1.0	18	2.3	13	2.5	11	2.1	5	4.0	2	1.6
MASSACHUSETTS	18	2.3			92	3.1	77	2.6	22	2.8	27	3.4	12	2.3	12	2.3	5	4.0	2	1.6
MICHIGAN	34	4.3 *	51	6.4	133	4.4	124	4.1	30	3.8	30	3.8	23	4.4	26	5.0	7	5.6	7	5.6
MINNESOTA	31	3.9	31	3.9	89	3.0	83	2.8	20	2.5	18	2.3	15	2.9	13	2.5	5	4.0	5	4.0
MISSISSIPPI	29	3.6	40	5.0	43	1.4 *	69	2.3	6	.8	15	1.9	7	1.3	9	1.7			1	.8
MISSOURI	19	2.4	18	2.3	65	2.2	57	1.9	19	2.4	10	1.3	8	1.5	14	2.7	5	4.0	4	3.2
MONTANA	4	.5	5	.6	22	.7	17	.6	4	.5	7	.9	3	.6	3	.6	1	.8	1	.8
NEBRASKA	4	.5	7	.9	36	1.[illegible]	36	1.2	6	.8	8	1.0	4	.8	2	.4			1	.8
NEVADA	4	.5	2	.3	9	.3	6	.2	2	.3	1	.1	3	.6	1	.2	1	.8		
NEW HAMPSHIRE	5	.6			21	.7	17	.6	4	.5	4	.5	4	.8	3	.6			1	.8
NEW JERSEY	16	2.0	15	1.9	7[illegible]	2.6	101	3.4	19	2.4	27	3.4	11	2.1	16	3.0	8	6.4	4	3.2
NEW MEXICO	12	1.5	10	1.3	16	.5	28	.9	4	.5	5	.6	2	.4	5	1.0	1	.8	2	1.6
NEW YORK	61	7.6 **	19	2.4	187	6.2	211	7.0	41	5.1	52	6.5	45	8.6	31	5.9	8	6.4	8	6.4
NORTH CAROLINA	19	2.4	13	1.6	64	2.1	53	1.8	19	2.4	15	1.9	11	2.1	5	1.0	2	1.6	1	.8
NORTH DAKOTA	3	.4	6	.8	26	.9	15	.5	2	.3	4	.5	2	.4	3	.6	2	1.6	1	.8
OHIO	28	3.5 **	58	7.3	158	5.3	133	4.4	46	5.8	32	4.0	24	4.6	21	4.0	6	4.8	8	6.4
OKLAHOMA	7	.9	4	.5	43	1.4	49	1.6	7	.9	13	1.6	9	1.7	11	2.1	3	2.4	3	2.4
OREGON	16	2.0	9	1.1	32	1.1	35	1.2	7	.9	13	1.6	6	1.1	4	.8	2	1.6	1	.8
PENNSYLVANIA	30	3.8 **	10	1.3	187	6.2	167	5.6	37	4.6	31	3.9	30	5.7	35	6.7	10	8.0	10	8.0
RHODE ISLAND	4	.5			5	.2	13	.4			1	.1	1	.2	1	.2				
SOUTH CAROLINA	12	1.5	10	1.3	59	2.0	65	2.2	26	3.3	22	2.8	5	1.0	6	1.1	3	2.4	1	.8
SOUTH DAKOTA	8	1.0	2	.3	16	.5	15	.5	4	.5	4	.5	2	.4	1	.2				
TENNESSEE	12	1.5	17	2.1	35	1.2	29	1.0	5	.6	5	.6	8	1.5	7	1.3	1	.8		
TEXAS	39	4.9	38	4.8	157	5.2	185	6.2	65	8.1	63	7.9	36	6.9 *	55	10.5	3	2.4	5	4.0
UTAH	9	1.1	8	1.0	26	.9	19	.6	10	1.3	6	.8	2	.4	4	.8	1	.8	3	2.4
VERMONT	5	.6			9	.3	7	.2			3	.4	1	.2						
VIRGINIA	19	2.4	13	1.6	57	1.9	64	2.1	14	1.8	13	1.6	9	1.7	10	1.9	1	.8	4	3.2
WASHINGTON STATE	25	3.1 **	59	7.4	60	2.0	56	1.9	14	1.8	17	2.1	11	2.1	9	1.7	1	.8	2	1.6
WEST VIRGINIA	2	.3	3	.4	26	.9	22	.7	3	.4	4	.5	8	1.5	4	.8	3	2.4		
WISCONSIN	14	1.8	25	3.1	87	2.9	77	2.6	20	2.5	18	2.3	14	2.7	17	3.2	4	3.2	1	.8
WYOMING	9	1.1	8	1.0	11	.4	12	.4	5	.6	3	.4	2	.4	2	.4			1	.8
CANADA	3	.4	1	.1	3	.1	5	.2			1	.1			3	.6				
PUERTO RICO	4	.5	3	.4	58	1.9 *	37	1.2	24	3.0	26	3.3	9	1.7	3	.6				
APO & OVERSEAS TERR.	9	1.1	3	.4	1		6	.2			3	.4	1	.2	1	.2				
CENTRAL & SOUTH AMERICA					1												1	.8		
OTHER FOREIGN	2	.3			11	.4	5	.2	5	.6			1	.2						
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

Table A-9 (continued)

STATE WHERE APPLICANT TEACHES

	SECONDARY SEQUEN. L ACCEPTED		SECONDARY SEQUEN. L REJECTED		SECONDARY SEQUEN. M ACCEPTED		SECONDARY SEQUEN. M REJECTED		SECONDARY SEQUEN. H ACCEPTED		SECONDARY SEQUEN. H REJECTED		COLLEGE L ACCEPTED		COLLEGE L REJECTED		COLLEGE M ACCEPTED		COLLEGE M REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ALABAMA	3	2.0	7	4.7	7	1.8	12	3.0	1	.5	3	1.5	1	.8	4	3.2	3	1.1	2	.7
ALASKA	4	2.7	2	1.3																
ARIZONA	1	.7	1	.7	11	2.8	4	1.0	1	.5	3	1.5	1	.8	4	3.2	1	.4	4	1.5
ARKANSAS	2	1.3	2	1.3	2	.5	3	.8	3	1.5	3	1.5	4	3.2	2	1.6	2	.7	4	1.5
CALIFORNIA	2	1.3	6	4.0	22	5.5	31	7.8	10	5.0	11	5.5	29	23.2	10	8.0	29	10.5	24	8.7
COLORADO	2	1.3	5	3.3	1	.3	6	1.5	2	1.0	3	1.5	3	2.4	2	1.6	1	.4	4	1.5
CONNECTICUT	2	1.3	2	1.3	3	.8			2	1.0	3	1.5	2	1.6	1	.8	2	.7		
DELAWARE	1	.7	1	.7			1	.3							1	.8				
DISTRICT OF COLUMBIA							1	.3			3	1.5					1	.4		
FLORIDA	2	1.3	4	2.7	9	2.3	11	2.8	4	2.0	3	1.5	3	2.4	3	2.4	10	3.6	8	2.9
GEORGIA	2	1.3	1	.7	7	1.8	6	1.5	2	1.0	2	1.0	2	1.6	3	2.4	5	1.8	5	1.8
HAWAII																	1	.4		
IDAHO	4	2.7			5	1.3	2	.5					1	.8	1	.8	1	.4		
ILLINOIS	7	4.7	8	5.3	21	5.3	14	3.5	20	10.0 *	10	5.0	4	3.2	6	4.8	10	3.6	18	6.5
INDIANA	2	1.3	4	2.7	8	2.0	7	1.8	11	5.5	11	5.5			2	1.6	4	1.5	1	.4
IOWA	3	2.0	1	.7	9	2.3	17	4.3	2	1.0	7	3.5	4	3.2	5	4.0	13	4.7	8	2.9
KANSAS	2	1.3	2	1.3	6	1.5	11	2.8	19	9.5	8	4.0	1	.8	3	2.4	8	2.9	6	2.2
KENTUCKY	1	.7			9	2.3	6	1.5	1	.5	1	.5	3	2.4			3	1.1	6	2.2
LOUISIANA	2	1.3	3	2.0	4	1.0	8	2.0	1	.5	5	2.5	1	.8			1	.4	7	2.5
MAINE	1	.7	1	.7	3	.8	3	.8	1	.5			1	.8	1	.8	1	.4		
MARYLAND	2	1.3	2	1.3	4	1.0	4	1.0	3	1.5	2	1.0					7	2.5	3	1.1
MASSACHUSETTS	6	4.0	2	1.3	13	3.3	9	2.3	6	3.0	4	2.0	2	1.6	2	1.6	6	2.2	6	2.2
MICHIGAN	4	2.7	9	6.0	20	5.0	19	4.8	10	5.0	4	2.0	7	5.6	4	3.2	15	5.5	14	5.1
MINNESOTA	5	3.3	2	1.3	15	3.8	13	3.3	9	4.5	8	4.0	1	.8	2	1.6	10	3.6	14	5.1
MISSISSIPPI	6	4.0	1	.7	4	1.0	10	2.5	1	.5	6	3.0			2	1.6	10	3.6	3	1.1
MISSOURI	1	.7	2	1.3	10	2.5	7	1.8	7	3.5	7	3.5	1	.8			6	2.2	9	3.3
MONTANA	1	.7			6	1.5	4	1.0	1	.5							2	.7	1	.4
NEBRASKA	4	2.7	2	1.3	5	1.3	8	2.0	1	.5	5	2.5	1	.8			2	.7	5	1.8
NEVADA			1	.7			2	.5												
NEW HAMPSHIRE	4	2.7			6	1.5	5	1.3			2	1.0	2	1.6			1	.4		
NEW JERSEY	5	3.3	11	7.3	11	2.8	8	2.0	9	4.5	10	5.0	1	.8	3	2.4	6	2.2	7	2.5
NEW MEXICO	1	.7			4	1.0	8	2.0			1	.5			1	.8	1	.4		
NEW YORK	6	4.0	6	4.0	25	6.3	33	8.3	20	10.0	18	9.0	8	6.4	7	5.6	19	6.9	20	7.3
NORTH CAROLINA	3	2.0	5	3.3	4	1.0	6	1.5			3	1.5	4	3.2	5	4.0	3	1.1	8	2.9
NORTH DAKOTA	10	6.7	2	1.3	5	1.3	2	.5	3	1.5	1	.5	1	.8	2	1.6	4	1.5	4	1.5
OHIO	12	8.0	8	5.3	21	5.3	25	6.3	15	7.5	8	4.0	2	1.6	11	8.8	4	1.5	4	1.5
OKLAHOMA			2	1.3	6	1.5	8	2.0	3	1.5	4	2.0	4	3.2	3	2.4	7	2.5	6	2.2
OREGON	4	2.7	3	2.0	7	1.8	2	.5	1	.5			1	.8	2	1.6	7	2.5	2	.7
PENNSYLVANIA	10	6.7	11	7.3	23	5.8	22	5.5	10	5.0	10	5.0	8	6.4	6	4.8	11	4.0	10	3.6
RHODE ISLAND			2	1.3			1	.3	1	.5	2	1.0			1	.8	2	.7		
SOUTH CAROLINA			6	4.0	6	1.5	12	3.0					1	.8			2	.7	7	2.5
SOUTH DAKOTA					6	1.5	3	.8					1	.8	2	1.6	1	.4	2	.7
TENNESSEE	2	1.3	2	1.3	3	.8					1	.5			2	1.6	6	2.2	4	1.5
TEXAS	3	2.0	5	3.3	17	4.3	16	4.0	9	4.5	8	4.0	9	7.2	8	6.4	17	6.2	16	5.8
UTAH			1	.7	1	.3	1	.3			1	.5	1	.8			2	.7		
VERMONT	2	1.3			2	.5	2	.5			1	.5			1	.8			3	1.1
VIRGINIA	4	2.7	2	1.3	12	3.0	7	1.8			5	2.5	2	1.6	4	3.2	1	.4	6	2.2
WASHINGTON STATE	8	5.3	3	2.0	8	2.0	6	1.5	2	1.0	4	2.0	3	2.4	3	2.4	7	2.5	8	2.9
WEST VIRGINIA	1	.7	2	1.3	4	1.0	2	.5			1	.5			1	.8	2	.7	1	.4
WISCONSIN	2	1.3	7	4.7	18	4.5	10	2.5	8	4.0	6	3.0	3	2.4	1	.8	15	5.5	10	3.6
WYOMING	1	.7					1	.3			1	.5			2	1.6	2	.7	1	.4
CANADA					1	.3			1	.5	1	.5			1	.8	1	.4		
PUERTO RICO					4	1.0									1	.8			1	.4
APO & OVERSEAS TERR.							1	.3												
CENTRAL & SOUTH AMERICA													2	1.6					1	.4
OTHER FOREIGN			1	.7	2	.5													2	.7
TOTALS	150		150		400		400		200		200		125		125		275		275	

STATE WHERE APPLICANT TEACHES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ALABAMA	1	.8	3	2.4	3	1.1	2	.7	5	.8	11	1.8	6	1.5	6	1.4	7	5.9	6	6.0
ALASKA											1	.2								
ARIZONA	1	.8	4	3.2	1	.4	4	1.5	7	1.2	8	1.3	3	.7	3	.7				
ARKANSAS	4	3.2	1	.8	2	.7	4	1.5	6	1.0	7	1.2	2	.5	3	.7	2	1.7	2	2.0
CALIFORNIA	29	23.2 **	12	9.6	29	10.5	24	8.7	48	8.0	66	11.0	31	7.6	30	7.1	4	3.4	4	4.0
COLORADO	3	2.4	2	1.6	1	.4	4	1.5	12	2.0	6	1.0	8	2.0	5	1.2	4	3.4		
CONNECTICUT	2	1.6	1	.8	2	.7			5	.8	4	.7	5	1.2	7	1.6			1	1.0
DELAWARE			1	.8									1	.2	1	.2				
DISTRICT OF COLUMBIA					1	.4			3	.5			1	.2	1	.2	1	.8	1	1.0
FLORIDA	3	2.4	2	1.6	10	3.6	8	2.9	14	2.3	33	5.5	** 17	4.2	15	3.5	4	3.4	5	5.0
GEORGIA	2	1.6	2	1.6	5	1.8	5	1.8	10	1.7	7	1.2	4	1.0	5	1.2	2	1.7	4	4.0
HAWAII					1	.4					1	.2					1	.8		
IDAHO	1	.8	1	.8	1	.4			1	.2					1	.2				
ILLINOIS	4	3.2	5	4.0	10	3.6	18	6.5	24	4.0	22	3.7	25	6.2	18	4.2	4	3.4	4	4.0
INDIANA			4	3.2	4	1.5	1	.4	9	1.5	6	1.0	11	2.7	7	1.6				
IOWA	4	3.2	5	4.0	13	4.7	8	2.9	13	2.2	12	2.0	10	2.5	9	2.1	2	1.7	3	3.0
KANSAS	1	.8	2	1.6	8	2.9	6	2.2	15	2.5	12	2.0	10	2.5	7	1.6	2	1.7	2	2.0
KENTUCKY	3	2.4			3	1.1	6	2.2	14	2.3	9	1.5	3	.7	5	1.2				
LOUISIANA	1	.8			1	.4	7	2.5	15	2.5	14	2.3	6	1.5	10	2.4	4	3.4	7	7.0
MAINE	1	.8	1	.8	1	.4			3	.5			2	.5	5	1.2	1	.8		
MARYLAND			1	.8	7	2.5	3	1.1	12	2.0	14	2.3	9	2.2	9	2.1	4	3.4	2	2.0
MASSACHUSETTS	2	1.6	3	2.4	6	2.2	6	2.2	16	2.7	3	.5	11	2.7	10	2.4	1	.8	2	2.0
MICHIGAN	7	5.6	3	2.4	15	5.5	14	5.1	23	3.8	29	4.8	16	3.9	22	5.2	7	5.9	4	4.0
MINNESOTA	1	.8	3	2.4	10	3.6	14	5.1	19	3.2	13	2.2	14	3.4	11	2.6	1	.8	2	2.0
MISSISSIPPI			3	2.4	10	3.6	3	1.1	5	.8	7	1.2	6	1.5	8	1.9	1	.8	1	1.0
MISSOURI	1	.8			6	2.2	9	3.3	13	2.2	14	2.3	4	1.0	14	3.3	4	3.4		
MONTANA					2	.7	1	.4	5	.8	2	.3	2	.5	3	.7	1	.8		
NEBRASKA	1	.8			2	.7	5	1.8	7	1.2	3	.5	3	.7	2	.5	1	.8		
NEVADA									2	.3			2	.5	1	.2	1	.3		
NEW HAMPSHIRE	2	1.6	1	.8	1	.4			2	.3	3	.5	4	1.0	3	.7				
NEW JERSEY	1	.8	3	2.4	6	2.2	7	2.5	13	2.2	7	1.2	6	1.5	12	2.8	5	4.2	4	4.0
NEW MEXICO			1	.8	1	.4			4	.7	2	.3	2	.5	4	.9			1	1.0
NEW YORK	8	6.4	8	6.4	19	6.9	20	7.3	44	7.3	35	5.8	34	8.4	26	6.1	11	9.2	5	5.0
NORTH CAROLINA	4	3.2	5	4.0	3	1.1	8	2.9	15	2.5	12	2.0	8	2.0	5	1.2	3	2.5		
NORTH DAKOTA	1	.8	3	2.4	4	1.5	4	1.5	7	1.2	3	.5	2	.5	3	.7				
OHIO	2	1.6	12	9.6	4	1.5	4	1.5	28	4.7	16	2.7	21	5.2	17	4.0	3	2.5	4	4.0
OKLAHOMA	4	3.2	3	2.4	7	2.5	6	2.2	10	1.7	12	2.0	5	1.2	10	2.4	4	3.4	1	1.0
OREGON	1	.8	2	1.6	7	2.5	2	.7	6	1.0	6	1.0	6	1.5	4	.9				
PENNSYLVANIA	8	6.4	5	4.0	11	4.0	10	3.6	40	6.7	36	6.0	24	5.9	26	6.1	6	5.0	9	9.0
RHODE ISLAND					2	.7					5	.8			1	.2	1	.8		
SOUTH CAROLINA	1	.8	1	.8	2	.7	7	2.5	6	1.0	8	1.3	4	1.0	6	1.4	1	.8		
SOUTH DAKOTA	1	.8	1	.8	1	.4	2	.7	4	.7	4	.7	2	.5					1	1.0
TENNESSEE			3	2.4	6	2.2	4	1.5	8	1.3	11	1.8	5	1.2	6	1.4	3	2.5	1	1.0
TEXAS	9	7.2	8	6.4	17	6.2	16	5.8	22	3.7	31	5.2	25	6.2	44	10.4	11	9.2	11	11.0
UTAH	1	.8			2	.7			4	.7	8	1.3	2	.5	4	.9				
VERMONT							3	1.1	5	.8	5	.8	1	.2						
VIRGINIA	2	1.6	2	1.6	1	.4	6	2.2	8	1.3	18	3.0	4	1.0	5	1.2	5	4.2	5	5.0
WASHINGTON STATE	3	2.4	4	3.2	7	2.5	8	2.9	9	1.5	15	2.5	11	2.7	9	2.1				
WEST VIRGINIA			1	.8	2	.7	1	.4	8	1.3	6	1.0	5	1.2	3	.7	3	2.5	1	1.0
WISCONSIN	3	2.4			15	5.5	10	3.6	28	4.7	25	4.2	13	3.2	11	2.6	1	.8	6	6.0
WYOMING			1	.8	2	.7	1	.4			3	.5	2	.5	2	.5				
CANADA			1	.8	1	.4			3	.5	1	.2			2	.5			1	1.0
PUERTO RICO			1	.8			1	.4	4	.7	4	.7	6	1.5	3	.7	3	2.5		
APO & OVERSEAS TERR.											1	.2	1	.2	1	.2				
CENTRAL & SOUTH AMERICA	2	1.6					1	.4	1	.2	6	1.0								
OTHER FOREIGN							2	.7	15	2.5	13	2.2	1	.2						
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-10

REGION WHERE APPLICANT TEACHES

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
PACIFIC WEST	108	13.5	120	15.0	304	10.1	283	9.4	102	12.8	89	11.1	53	10.1	46	8.8	4	3.2	9	7.2
WEST	70	8.8	63	7.9	169	5.6	161	5.4	53	6.6	45	5.6	27	5.1	25	4.8	7	5.6	11	8.8
WEST NORTH CENTRAL	86	10.8*	118	14.8	350	11.7	337	11.2	70	8.8	69	8.6	54	10.3	51	9.7	15	12.0	14	11.2
EAST NORTH CENTRAL	130	16.3**	207	25.9	611	20.4	529	17.6	145	18.1	127	15.9	103	19.6	96	18.3	36	28.8	28	22.4
WEST SOUTH CENTRAL	79	9.9	87	10.9	273	9.1**	346	11.5	82	10.3*	108	13.5	61	11.6*	88	16.8	7	5.6	11	8.8
EAST SOUTH CENTRAL	67	8.4	80	10.0	180	6.0	198	6.6	46	5.8	47	5.9	30	5.7	33	6.3	4	3.2	4	3.2
MIDDLE ATLANTIC	106	13.3**	42	5.3	453	15.1	478	15.9	98	12.3	110	13.8	85	16.2	83	15.8	26	20.8	22	17.6
NEW ENGLAND	42	5.3	1	.1	174	5.8	159	5.3	42	5.3	44	5.5	27	5.1	28	5.3	5	4.0	6	4.8
SOUTH ATLANTIC	98	12.3	75	9.4	413	13.8	459	15.3	134	16.8	133	16.6	75	14.3	68	13.0	20	16.0	20	16.0
OUTSIDE U.S.	14	1.8	7	.9	73	2.4	50	1.7	28	3.5	28	3.5	10	1.9	7	1.3	1	.8		
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
PACIFIC WEST	18	12.0	14	9.3	37	9.3	39	9.8	13	6.5	15	7.5
WEST	10	6.7	8	5.3	28	7.0	26	6.5	4	2.0	9	4.5
WEST NORTH CENTRAL	24	16.0 *	12	8.0	56	14.0	61	15.3	39	19.5	37	18.5
EAST NORTH CENTRAL	27	18.0	36	24.0	88	22.0	75	18.8	65	32.5**	39	19.5
WEST SOUTH CENTRAL	7	4.7	12	8.0	29	7.3	37	9.3	18	9.0	19	9.5
EAST SOUTH CENTRAL	13	8.7	10	6.7	23	5.8	28	7.0	3	1.5	11	5.5
MIDDLE ATLANTIC	21	14.0	27	18.0	59	14.8	63	15.8	39	19.5	38	19.0
NEW ENGLAND	15	10.0	8	5.3	27	6.8	20	5.0	9	4.5	12	6.0
SOUTH ATLANTIC	15	10.0	23	15.3	45	11.3	50	12.5	9	4.5	19	9.5
OUTSIDE U.S.					8	2.0	1	.3	1	.5	1	.5
TOTALS	150		150		400		400		200		200	

Table A-10 (continued)

REGION WHERE APPLICANT TEACHES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
PACIFIC WEST	33	26.4 *	18	14.4	43	15.6	34	12.4	65	10.8 *	89	14.8	48	11.8	42	9.9	5	4.2	4	4.0
WEST	6	4.8	9	7.2	11	4.0	10	3.6	36	6.0	28	4.7	21	5.2	24	5.6	6	5.0	1	1.0
WEST NORTH CENTRAL	8	6.4	13	10.4	44	16.0	45	16.4	76	12.7	60	10.0	44	10.8	44	10.4	10	8.4	7	7.0
EAST NORTH CENTRAL	16	12.8	26	20.8	48	17.5	49	17.8	115	19.2	100	16.7	87	21.4	77	18.1	16	13.4	19	19.0
WEST SOUTH CENTRAL	18	14.4	12	9.6	28	10.2	33	12.0	53	8.8	65	10.8	40	9.9 *	67	15.8	21	17.6	21	21.0
EAST SOUTH CENTRAL	4	3.2	8	6.4	20	7.3	15	5.5	31	5.2	39	6.5	19	4.7	25	5.9	11	9.2	8	8.0
MIDDLE ATLANTIC	17	13.6	16	12.8	37	13.5	37	13.5	97	16.2	77	12.8	64	15.8	65	15.3	21	17.6	18	18.0
NEW ENGLAND	7	5.6	6	4.8	11	4.0	9	3.3	32	5.3	22	3.7	23	5.7	25	5.9	4	3.4	3	3.0
SOUTH ATLANTIC	14	11.2	15	12.0	32	11.6	39	14.2	77	12.8	94	15.7	52	12.8	50	11.8	23	19.3	18	18.0
OUTSIDE U.S.	2	1.6	2	1.6	1	.4	4	1.5	18	3.0	26	4.3	8	2.0	6	1.4	2	1.7	1	1.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-11

UNDERGRAD CREDITS BIOLOGICAL SCIENCES

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	515	64.4	499	62.4	1001	33.4	1019	34.0	259	32.4	261	32.6	175	33.3	188	35.8	30	24.0	31	24.8
11-20	129	16.1	142	17.8	574	19.1	630	21.0	176	22.0	196	24.5	93	17.7	111	21.1	17	13.6	19	15.2
21-30	31	3.9	35	4.4	459	15.3	400	13.3	140	17.5	108	13.5	82	15.6	70	13.3	23	18.4	15	12.0
31-40	16	2.0	16	2.0	311	10.4	289	9.6	85	10.6	75	9.5	66	12.6	41	7.8	25	20.0	26	20.8
41-50	4	.5	4	.5	88	2.9	102	3.4	21	2.6	28	3.5	21	4.0	16	3.0	6	4.8	7	5.6
51-60			1	.1	31	1.0	15	.5	7	.9			6	1.1	4	.8	2	1.6		
61-70					7	.2	9	.3	3	.4	1	.1			1	.2			1	.8
71-80					3	.1	3	.1					1	.2						
81 AND OVER																				
NO ENTRIES	105	13.1	103	12.9	526	17.5	533	17.8	109	13.6	130	16.3	81	15.4	94	17.9	22	17.6	26	20.8
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	7.97		8.30		14.52		14.04		15.35	*	14.08		15.62	**	13.35		18.29		17.24	
STANDARD DEVIATIONS	7.45		7.77		13.55		13.27		13.11		12.48		14.05		12.77		15.02		15.40	

	SECONDARY ACCEPTED		SEQUEN. L REJECTED		SECONDARY ACCEPTED		SEQUEN. M REJECTED		SECONDARY ACCEPTED		SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	47	31.3	46	30.7	138	34.5	133	33.3	85	42.5	86	43.0
11-20	44	29.3	46	30.7	79	19.8	79	19.8	19	9.5	26	13.0
21-30	16	10.7	25	16.7	56	14.0	50	12.5	26	13.0	25	12.5
31-40	17	11.3	9	6.0	28	7.0	40	10.0	13	6.5	16	8.0
41-50	3	2.0	5	3.3	7	1.8	13	3.3	2	1.0	4	2.0
51-60	1	.7			7	1.8	3	.8	3	1.5	2	1.0
61-70			1	.7			2	.5				
71-80					1	.3					1	.5
81 AND OVER												
NO ENTRIES	22	14.7	18	12.0	84	21.0	80	20.0	52	26.0	40	20.0
TOTALS	150		150		400		400		200		200	
MEANS	14.29		14.77		12.97		13.85		10.72		12.25	
STANDARD DEVIATIONS	12.23		12.09		13.16		13.59		12.41		13.30	

Table A-11 (continued)

UNDERGRAD CREDITS BIOLOGICAL SCIENCES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	30	24.0	44	35.2	74	26.9	68	24.7	138	23.0	159	26.5	131	32.3	146	34.4	44	37.0	42	42.0
11-20	5	4.0	11	8.8	31	11.3	27	9.8	51	8.5	56	9.3	77	19.0	88	20.7	16	13.4	23	23.0
21-30			6	4.8	10	3.6	11	4.0	41	6.8	49	8.2	60	14.8	58	13.6	22	18.5	12	12.0
31-40			6	4.8	3	1.1	3	1.1	42	7.0	56	9.3	53	13.1	32	7.5	13	10.9	9	9.0
41-50	1	.8	3	2.4	2	.7	1	.4	19	3.2	19	3.2	16	3.9	14	3.3	5	4.2	2	2.0
51-60									11	1.8	8	1.3	5	1.2	2	.5	1	.8	2	2.0
61-70			1	.8	2	.7			5	.8									1	1.0
71-80									1	.2							1	.8		
81 AND OVER									2	.3	2	.3								
NO ENTRIES	89	71.2	54	43.2	153	55.6	165	60.0	290	48.3	251	41.8	64	15.8	85	20.0	17	14.3	9	9.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	2.30	**	7.84		5.35		4.45		10.23		10.77		15.59	**	13.01		15.72		14.81	
STANDARD DEVIATIONS	5.30		12.08		9.50		7.64		15.72		14.70		13.86		12.53		14.66		13.64	

TABLE A-12

UNDERGRADUATE CREDITS CHEMISTRY

	ELEMENTARY				SECONDARY	COMBINED			SECONDARY	UNITARY L			SECONDARY	UNITARY M			SECONDARY	UNITARY H		
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	219	27.4	232	29.0	1163	38.8	1199	40.0	326	40.8	320	40.0	216	41.1	221	42.1	48	38.4	42	33.6
11-20	45	5.6	33	4.1	676	22.5	615	20.5	156	19.5	146	18.3	129	24.6	110	21.0	24	19.2	27	21.6
21-30	7	.9	5	.6	320	10.7	290	9.7	65	8.1	56	7.0	59	11.2	51	9.7	18	14.4	13	10.4
31-40	5	.6	3	.4	138	4.6	102	3.4	24	3.0	15	1.9	20	3.8	25	4.8	8	6.4	6	4.8
41-50	1	.1			40	1.3	24	.8	5	.6	5	.6	8	1.5	4	.8	5	4.0	2	1.6
51-60					12	.4	4	.1					1	.2	1	.2	2	1.6		
61-70					2	.1	3	.1									1	.8		
71-80							1													
81 AND OVER					1															
NO ENTRIES	523	65.4	527	65.9	648	21.6	762	25.4	224	28.0	258	32.3	92	17.5	113	21.5	19	15.2	35	28.0
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	2.88		2.53		10.88 **		9.58		8.69 *		7.76		11.09		10.18		14.26 *		10.28	
STANDARD DEVIATIONS	5.44		4.59		10.95		10.10		9.34		8.81		10.34		10.20		13.96		10.84	

	SECONDARY	SEQUEN. L			SECONDARY	SEQUEN. M			SECONDARY	SEQUEN. H		
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	71	47.3	60	40.0	151	37.8	160	40.0	62	31.0	85	42.5
11-20	25	16.7	32	21.3	93	23.3	95	23.8	55	27.5	33	16.5
21-30	12	8.0	19	12.7	58	14.5	45	11.3	20	10.0	28	14.0
31-40	4	2.7	1	.7	32	8.0	22	5.5	5	2.5	8	4.0
41-50			3	2.0	7	1.8	3	.8	2	1.0	1	.5
51-60					4	1.0	1	.3	3	1.5		
61-70							1	.3				
71-80												
81 AND OVER												
NO ENTRIES	38	25.3	35	23.3	55	13.8	73	18.3	53	26.5	45	22.5
TOTALS	150		150		400		400		200		200	
MEANS	8.17		9.88		13.57 **		11.35		10.69		10.11	
STANDARD DEVIATIONS	8.55		9.89		12.05		10.80		11.16		10.10	

Table A-12 (continued)

UNDERGRADUATE CREDITS CHEMISTRY

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	63	50.4	60	48.0	85	30.9	94	34.2	182	30.3	201	33.5	173	42.6	188	44.2	43	36.1	33	33.0
11-20	18	14.4	16	12.8	47	17.1	36	13.1	113	18.8	142	23.7	103	25.4	89	20.9	26	21.8	21	21.0
21-30	6	4.8	2	1.6	30	10.9	19	6.9	71	11.8	77	12.8	49	12.1	39	9.2	10	8.4	12	12.0
31-40	6	4.8	4	3.2	24	8.7	18	6.5	61	10.2	39	6.5	17	4.2	19	4.5	3	2.5	6	6.0
41-50	2	1.6	1	.8	8	2.9	10	3.6	41	6.8	16	2.7	6	1.5	1	.2	2	1.7	3	3.0
51-60					2	.7	3	1.1	19	3.2	2	.3	1	.2	1	.2				
61-70					3	1.1			4	.7										
71-80					1	.4														
81 AND OVER									2	.3	2	.3								
NO ENTRIES	30	24.0	42	33.6	75	27.3	95	34.5	107	17.8	121	20.2	57	14.0	88	20.7	35	29.4	25	25.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	8.66		6.53		12.95	*	10.25		16.80	**	12.77		11.65	**	9.84		9.18		11.63	
STANDARD DEVIATIONS	9.98		8.36		14.62		13.15		16.40		12.61		10.37		9.74		10.02		11.87	

TABLE A-13

UNDERGRADUATE CREDITS EARTH SCIENCES

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	353	44.1	350	43.8	941	31.4	927	30.9	253	31.6	245	30.6	171	32.6	183	34.9	41	32.8	36	28.8
11-20	34	4.3	35	4.4	104	3.5	120	4.0	38	4.8	39	4.9	16	3.0	21	4.0	3	2.4	4	3.2
21-30	5	.6			15	.5	27	.9	4	.5	7	.9	3	.6	5	1.0	2	1.6		
31-40			1	.1	14	.5	15	.5	5	.6	4	.5	2	.4	2	.4			1	.8
41-50					13	.4	11	.4	3	.4	2	.3	1	.2	5	1.0				
51-60					3	.1	4	.1	3	.4	1	.1			1	.2				
61-70					1		1								1	.2				
71-80	1	.1			1				1	.1										
81 AND OVER																				
NO ENTRIES	407	50.9	414	51.8	1908	63.6	1895	63.2	493	61.6	502	62.8	332	63.2	307	58.5	79	63.2	84	67.2
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	3.34		3.13		2.86		2.99		3.30		3.02		2.63		3.58		2.58		2.36	
STANDARD DEVIATIONS	4.85		3.94		5.84		5.94		6.90		5.73		4.76		7.21		4.40		4.57	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREC.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	47	31.3	53	35.3	129	32.3	112	28.0	61	30.5	52	26.0
11-20	3	2.0	5	3.3	16	4.0	21	5.3	4	2.0	6	3.0
21-30	1	.7	1	.7	3	.8	2	.5			4	2.0
31-40	1	.7			2	.5	2	.5	1	.5		
41-50					3	.8			1	.5		
51-60												
61-70					1	.3						
71-80												
81 AND OVER												
NO ENTRIES	98	65.3	91	60.7	246	61.5	263	65.8	133	66.5	138	69.0
TOTALS	150		150		400		400		200		200	
MEANS	2.44		2.63		3.27		2.66		2.39		2.41	
STANDARD DEVIATIONS	4.59		4.01		6.79		4.85		4.99		4.72	

Table A-13 (continued)

UNDERGRADUATE CREDITS EARTH SCIENCES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	33	26.4	34	27.2	63	22.9	49	17.8	113	18.8	138	23.0	142	35.0	160	37.6	29	24.4	23	23.0
11-20	4	3.2	6	4.8	16	5.8	6	2.2	23	3.8	18	3.0	15	3.7	19	4.5	1	.8	2	2.0
21-30	1	.8			2	.7	1	.4	7	1.2	12	2.0	3	.7	5	1.2				
31-40	1	.8					1	.4	4	.7	1	.2	2	.5	2	.5				
41-50	1	.8			1	.4	1	.4	3	.5	3	.5	1	.2	5	1.2				
51-60							1	.4	2	.3	1	.2			1	.2				
61-70															1	.2				
71-80											1	.2								
81 AND OVER	1	.8																		
NO ENTRIES	84	67.2	85	68.0	193	70.2	216	78.5	448	74.7	426	71.0	243	59.9	232	54.6	89	74.8	75	75.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	3.48		2.24		2.51		1.91		2.58		2.75		2.97		* 4.05		1.47		1.58	
STANDARD DEVIATIONS	9.68		3.84		5.18		5.71		6.69		6.83		5.17		7.81		2.68		3.04	

TABLE A-14

UNDERGRADUATE CREDITS EDUCATION

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	44	5.5	45	5.6	234	7.8	245	8.2	60	7.5	63	7.9	45	8.6	41	7.8	9	7.2	8	6.4
11-20	152	19.0	151	18.9	1040	34.7	975	32.5	256	32.0	235	29.4	180	34.3	170	32.4	49	39.2	36	28.8
21-30	256	32.0	284	35.5	1168	38.9	1236	41.2	318	39.8	333	41.6	198	37.7	214	40.8	48	38.4	64	51.2
31-40	179	22.4	178	22.3	251	8.4	281	9.4	86	10.8	85	10.6	43	8.2	51	9.7	8	6.4	8	6.4
41-50	65	8.1	62	7.8	52	1.7	43	1.4	15	1.9	16	2.0	12	2.3	6	1.1	2	1.6	2	1.6
51-60	15	1.9	25	3.1	12	.4	11	.4	3	.4	4	.5			2	.4	1	.8		
61-70	10	1.3	6	.8	5	.2	9	.3	3	.4	5	.6			1	.2				
71-80	1	.1			5	.2	1		1	.1	1	.1								
81 AND OVER	2	.3	5	.6	4	.1	8	.3	1	.1	6	.8	1	.2						
NO ENTRIES	76	9.5	44	5.5	229	7.6	191	6.4	57	7.1	52	6.5	46	8.8	40	7.6	8	6.4	7	5.6
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	25.22		26.47		20.06		20.62		20.83		21.71		19.51		20.15		19.71		20.87	
STANDARD DEVIATIONS	14.37		13.85		10.79		10.79		11.03		12.32		10.67		10.26		9.80		9.06	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	4	2.7	13	8.7	45	11.3	37	9.3	14	7.0	14	7.0
11-20	57	38.0	51	34.0	138	34.5	133	33.3	73	36.5	64	32.0
21-30	51	34.0	58	38.7	151	37.8	176	44.0	84	42.0	91	45.5
31-40	23	15.3	20	13.3	33	8.3	28	7.0	9	4.5	17	8.5
41-50	4	2.7	3	2.0	2	.5	3	.8	1	.5	2	1.0
51-60							1	.3				
61-70			1	.7								
71-80	1	.7										
81 AND OVER	1	.7							1	.5		
NO ENTRIES	9	6.0	4	2.7	31	7.8	22	5.5	18	9.0	12	6.0
TOTALS	150		150		400		400		200		200	
MEANS	22.44		21.69		18.75		19.85		19.01		20.42	
STANDARD DEVIATIONS	12.04		10.17		9.72		9.29		10.26		9.25	

Table A-14 (continued)

UNDERGRADUATE CREDITS EDUCATION

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	15	12.0	16	12.8	31	11.3	33	12.0	70	11.7	68	11.3	36	8.9	31	7.3	9	7.6	10	10.0
11-20	26	20.8	25	20.0	81	29.5	78	28.4	97	16.2	137	22.8	151	37.2	147	34.6	29	24.4	23	23.0
21-30	16	12.8	19	15.2	61	22.2	53	19.3	74	12.3	100	16.7	149	36.7	170	40.0	49	41.2	44	44.0
31-40	1	.8	7	5.6	10	3.6	13	4.7	13	2.2	23	3.8	26	6.4	36	8.5	17	14.3	15	15.0
41-50	1	.8	3	2.4	1	.4	3	1.1	1	.2	3	.5	4	1.0	4	.9	8	6.7	2	2.0
51-60	1	.8	1	.8	1	.4	1	.4	2	.3	1	.2			2	.5				
61-70	1	.8					1	.4											1	1.0
71-80																				
81 AND OVER													1	.2						
NO ENTRIES	64	51.2	54	43.2	90	32.7	93	33.8	343	57.2	268	44.7	39	9.6	35	8.2	7	5.9	5	5.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	8.76		11.20		12.50		12.59		7.32	**	10.09		18.54		19.66		22.82		22.23	
STANDARD DEVIATIONS	12.06		13.04		11.25		12.15		10.48		11.33		10.29		9.98		11.26		11.12	

TABLE A-15

UNDERGRADUATE CREDITS ENGINEERING

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	6	.8	3	.4	20	.7	6	.2	1	.1	3	.4								
11-20					3	.1	7	.2			1	.1			1	.2	1	.8		
21-30					3	.1	3	.1	2	.3	1	.1			1	.2	1	.8		
31-40			1	.1	1															
41-50					1		1								1	.2				
51-60					1															
61-70																				
71-80					2	.1														
81 AND OVER																				
NO ENTRIES	794	99.3	796	99.5	2969	99.0	2983	99.4	797	99.6	795	99.4	525	100	522	99.4	123	98.4	125	100
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	.04		.07		.17		.09		.07		.07				.16		.33			
STANDARD DEVIATIONS	.47		1.29		2.64		1.39		1.28		1.10				2.36		2.64			

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	1	.7							14	7.0	3	1.5
11-20	1	.7					1	.3			1	.5
21-30			1	.7								
31-40									1	.5		
41-50					1	.3						
51-60												
61-70												
71-80					1	.3						
81 AND OVER												
NO ENTRIES	148	98.7	149	99.3	398	99.5	399	99.8	185	92.5	196	98.0
TOTALS	150		150		400		400		200		200	
MEANS	.14		.17		.30		.04		.56		.16	
STANDARD DEVIATIONS	1.33		2.07		4.39		.77		2.84		1.27	

Table A-15 (continued)

UNDERGRADUATE CREDITS ENGINEERING

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	11	8.8	3	2.4	4	1.5	5	1.8	6	1.0	8	1.3								
11-20	7	5.6	2	1.6	8	2.9	6	2.2	6	1.0	6	1.0			1	.2				
21-30	4	3.2			1	.4	3	1.1	7	1.2					1	.2				
31-40	7	5.6	2	1.6	4	1.5	3	1.1	9	1.5	5	.8								
41-50	6	4.8	1	.8	1	.4	4	1.5	7	1.2	8	1.3			1	.2				
51-60	3	2.4	2	1.6	3	1.1			3	.5	2	.3								
61-70	3	2.4			1	.4	1	.4	8	1.3	4	.7								
71-80	4	3.2	2	1.6					2	.3	1	.2								
81 AND OVER	6	4.8			2	.7	1	.4	1	.2	4	.7								
NO ENTRIES	74	59.2	113	90.4	251	91.3	252	91.6	551	91.8	562	93.7	406	100	422	99.3	119	100	100	100
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	15.76	**	3.41		2.77		2.31		3.12		2.45				.20					
STANDARD DEVIATIONS	25.85		13.04		11.41		9.67		12.14		11.49				2.63					

TABLE A-16

UNDERGRADUATE CREDITS MATHEMATICS

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	498	62.3	524	65.5	979	32.6	1009	33.6	379	47.4	359	44.9	143	27.2	162	30.9	28	22.4	41	32.8
11-20	106	13.3	87	10.9	670	22.3	631	21.0	163	20.4	159	19.9	113	21.5	111	21.1	33	26.4	21	16.8
21-30	33	4.1	19	2.4	643	21.4	597	19.9	111	13.9	101	12.6	128	24.4	106	20.2	23	18.4	30	24.0
31-40	8	1.0	5	.6	366	12.2	392	13.1	34	4.3	57	7.1	74	14.1	84	16.0	18	14.4	19	15.2
41-50			1	.1	56	1.9	70	2.3	2	.3	7	.9	15	2.9	16	3.0	1	.8	3	2.4
51-60					5	.2	4	.1	1	.1			2	.4						
61-70					3	.1														
71-80					1		1													
81 AND OVER																				
NO ENTRIES	155	19.4	164	20.5	277	9.2	296	9.9	110	13.8	117	14.6	50	9.5	46	8.8	22	17.6	11	8.8
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	6.88	*	6.17		16.09		15.98		10.99		11.70		17.57		17.19		15.49		17.02	
STANDARD DEVIATIONS	6.53		5.80		12.16		12.39		9.75		10.70		12.58		12.67		12.16		12.57	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	60	40.0	65	43.3	99	24.8	105	26.3	35	17.5	37	18.5
11-20	30	20.0	43	28.7	112	28.0	109	27.3	29	14.5	30	15.0
21-30	26	17.3	16	10.7	105	26.3	93	23.3	58	29.0	55	27.5
31-40	15	10.0	11	7.3	56	14.0	47	11.8	62	31.0	55	27.5
41-50	2	1.3			9	2.3	14	3.5	10	5.0	11	5.5
51-60											1	.5
61-70					2	.5						
71-80											1	.5
81 AND OVER												
NO ENTRIES	17	11.3	15	10.0	17	4.3	32	8.0	6	3.0	10	5.0
TOTALS	150		150		400		400		200		200	
MEANS	13.88		12.15		18.72		17.36		23.89		23.28	
STANDARD DEVIATIONS	11.57		9.80		11.81		11.99		12.34		13.53	

Table A-10 (continued)

UNDERGRADUATE CREDITS MATHEMATICS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	25	20.0	45	36.0	41	14.9	51	18.5	114	19.0	138	23.0	121	29.8	132	31.1	22	18.5	30	30.0
11-20	44	35.2	29	23.2	77	28.0	59	21.5	173	28.8	137	22.8	86	21.2	89	20.9	27	22.7	22	22.0
21-30	30	24.0	18	14.4	98	35.6	75	27.3	173	28.8	155	25.8	95	23.4	86	20.2	33	27.7	20	20.0
31-40	11	8.8	4	3.2	36	13.1	45	16.4	65	10.8	77	12.8	55	13.5	67	15.8	19	16.0	17	17.0
41-50	1	.8			15	5.5	15	5.5	17	2.8	22	3.7	12	3.0	14	3.3	3	2.5	2	2.0
51-60			2	1.6			3	1.1	5	.8	5	.8	2	.5						
61-70					1	.4	2	.7	3	.5	1	.2								
71-80							1	.4												
81 AND OVER																				
NO ENTRIES	14	11.2	27	21.6	7	2.5	24	8.7	50	8.3	65	10.8	35	8.6	37	8.7	15	12.6	9	9.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	16.16	**	11.27		21.61		20.95		18.79		18.19		17.32		17.21		18.42		17.11	
STANDARD DEVIATIONS	10.62		11.08		11.39		14.15		12.31		13.01		12.62		12.72		12.43		12.45	

TABLE A-17

UNDERGRADUATE CREDITS PHYSICS

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	270	33.8	229	28.6	1406	46.9	1468	48.9	377	47.1	379	47.4	233	44.4	250	47.6	64	51.2	62	49.6
11-20	18	2.3	19	2.4	530	17.7	415	13.8	78	9.8	80	10.0	110	21.0	75	14.3	19	15.2	19	15.2
21-30	1	.1	1	.1	126	4.2	106	3.5	17	2.1	16	2.0	25	4.8	29	5.5	3	2.4	1	.8
31-40					40	1.3	31	1.0	3	.4	5	.6	8	1.5	5	1.0	4	3.2		
41-50					13	.4	7	.2					2	.4	2	.4	2	1.6		
51-60					2	.1	2	.1			1	.1	2	.4						
61-70																				
71-80																				
81 AND OVER							1								1	.2				
NO ENTRIES	511	63.9	551	68.9	883	29.4	970	32.3	325	40.6	319	39.9	145	27.6	163	31.0	33	26.4	43	34.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	2.24		1.97		7.09	**	6.28		4.78		4.96		7.83		6.92		7.65	*	5.29	
STANDARD DEVIATIONS	3.38		3.35		7.83		7.34		5.77		6.20		8.50		8.40		9.08		5.36	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	74	49.3	88	58.7	192	48.0	200	50.0	86	43.0	92	46.0
11-20	23	15.3	19	12.7	95	23.8	68	17.0	44	22.0	43	21.5
21-30	4	2.7	1	.7	17	4.3	16	4.0	20	10.0	10	5.0
31-40	1	.7	1	.7	3	.8	8	2.0	9	4.5	2	1.0
41-50					3	.8	2	.5	1	.5		
51-60												
61-70												
71-80												
81 AND OVER												
NO ENTRIES	48	32.0	41	27.3	90	22.5	106	26.5	40	20.0	53	26.5
TOTALS	150		150		400		400		200		200	
MEANS	6.01		5.60		8.01		7.34		10.15	**	7.49	
STANDARD DEVIATIONS	6.43		5.44		7.74		7.97		9.74		7.38	

Table A-17 (continued)

UNDERGRADUATE CREDITS PHYSICS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	54	43.2	48	38.4	102	37.1	99	36.0	251	41.8	250	41.7	184	45.3	199	46.8	49	41.2	51	51.0
11-20	27	21.6	19	15.2	69	25.1	60	21.8	136	22.7	144	24.0	99	24.4	65	15.3	11	9.2	10	10.0
21-30	14	11.2	3	2.4	21	7.6	24	8.7	58	9.7	45	7.5	22	5.4	27	6.4	3	2.5	2	2.0
31-40	3	2.4	2	1.6	16	5.8	11	4.0	21	3.5	22	3.7	8	2.0	4	.9			1	1.0
41-50					1	.4	6	2.2	17	2.8	6	1.0	1	.2	2	.5	1	.8		
51-60	1	.8			1	.4			1	.2	1	.2	2	.5						
61-70											1	.2								
71-80	1	.8									1	.2								
81 AND OVER					1	.4									1	.2				
NO ENTRIES	25	20.0	53	42.4	64	23.3	75	27.3	116	19.3	130	21.7	90	22.2	127	29.9	55	46.2	36	36.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	10.48	**	5.65		10.62		10.00		10.90		10.01		8.74	*	7.32		4.72		5.22	
STANDARD DEVIATIONS	11.33		7.21		11.27		10.75		10.90		10.37		8.73		8.80		6.79		6.14	

TABLE A-18

TOTAL UNDERGRADUATE CREDITS IN SCIENCES

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	102	12.8	119	14.9	45	1.5	54	1.8	35	4.4	35	4.4	1	.2	4	.8				
11-20	297	37.1	334	41.8	176	5.9	199	6.6	101	12.6	93	11.6	14	2.7	17	3.2	1	.8	3	2.4
21-30	202	25.3	184	23.0	286	9.5	359	12.0	126	15.8	137	17.1	33	6.3	52	9.9	10	8.0	5	4.0
31-40	90	11.3	58	7.3	377	12.6	436	14.5	97	12.1	127	15.9	70	13.3	89	17.0	12	9.6	21	16.8
41-50	37	4.6	46	5.8	442	14.7	481	16.0	109	13.6	106	13.3	89	17.0	85	16.2	14	11.2	32	25.6
51-60	20	2.5	24	3.0	538	17.9	512	17.1	109	13.6	120	15.0	104	19.8	95	18.1	15	12.0	24	19.2
61-70	18	2.3	14	1.8	553	18.4	482	16.1	121	15.1	90	11.3	105	20.0	80	15.2	34	27.2	20	16.0
71-80	7	.9	3	.4	340	11.3	284	9.5	61	7.6	49	6.1	64	12.2	65	12.4	26	20.8	14	11.2
81-90	2	.3	1	.1	144	4.8	99	3.3	15	1.9	24	3.0	32	6.1	14	2.7	11	8.8	2	1.6
91-100			1	.1	46	1.5	42	1.4	13	1.6	2	.3	7	1.3	8	1.5	2	1.6	3	2.4
101-110					21	.7	18	.6	4	.5	2	.3	1	.2	6	1.1			1	.8
111-120	1	.1			11	.4	3	.1	1	.1			3	.6	2	.4				
121 AND OVER					11	.4	8	.3	1	.1	1	.1	2	.4	3	.6				
NO ENTRIES	24	3.0	16	2.0	10	.3	23	.8	7	.9	14	1.8			5	1.0				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	22.87		21.67		52.36	**	49.02		43.93	*	41.62		55.60	**	51.92		59.90	*	53.10	
STANDARD DEVIATIONS	15.16		14.31		21.51		21.26		22.80		21.59		19.05		21.07		18.17		17.17	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	2	1.3	2	1.3	1	.3	2	.5	1	.5		
11-20	13	8.7	10	6.7	10	2.5	25	6.3	3	1.5	3	1.5
21-30	18	12.0	21	14.0	21	5.3	41	10.3	2	1.0	14	7.0
31-40	26	17.3	29	19.3	52	13.0	49	12.3	22	11.0	25	12.5
41-50	29	19.3	30	20.0	59	14.8	68	17.0	28	14.0	30	15.0
51-60	30	20.0	24	16.0	70	17.5	54	13.5	56	28.0	40	20.0
61-70	18	12.0	19	12.7	85	21.3	82	20.5	41	20.5	53	26.5
71-80	10	6.7	9	6.0	65	16.3	51	12.8	22	11.0	21	10.5
81-90	2	1.3	4	2.7	19	4.8	15	3.8	17	8.5	8	4.0
91-100	2	1.3	2	1.3	8	2.0	11	2.8	3	1.5	3	1.5
101-110					7	1.8	1	.3	1	.5	2	1.0
111-120									1	.5		
121 AND OVER					3	.8	1	.3	1	.5	1	.5
NO ENTRIES									2	1.0		
TOTALS	150		150		400		400		200		200	
MEANS	45.83		45.90		57.73	*	52.65		58.50		56.20	
STANDARD DEVIATIONS	18.63		18.79		19.92		20.74		18.58		18.15	

Table A-18 (continued)

TOTAL UNDERGRADUATE CREDITS IN SCIENCES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	8	6.4	12	9.6	18	6.5	26	9.5	17	2.8	14	2.3	1	.2	4	.9				
11-20	15	12.0	29	23.2	12	4.4	12	4.4	24	4.0	23	3.8	10	2.5	14	3.3	4	3.4	3	3.0
21-30	9	7.2	11	8.8	16	5.8	15	5.5	16	2.7	44	7.3	24	5.9	41	9.6	9	7.6	11	11.0
31-40	11	8.8	14	11.2	25	9.1	19	6.9	41	6.8	51	8.5	44	10.8	72	16.9	26	21.8	17	17.0
41-50	15	12.0	13	10.4	27	9.8	27	9.8	54	9.0	69	11.5	64	15.8	68	16.0	25	21.0	17	17.0
51-60	8	6.4	10	8.0	42	15.3	32	11.6	49	8.2	83	13.8	82	20.2	79	18.6	22	18.5	16	16.0
61-70	11	8.8	12	9.6	34	12.4	40	14.5	109	18.2	105	17.5	90	22.2	67	15.8	15	12.6	13	13.0
71-80	9	7.2	6	4.8	43	15.6	47	17.1	107	17.8	88	14.7	54	13.3	49	11.5	10	8.4	16	16.0
81-90	3	2.4	6	4.8	31	11.3	21	7.6	86	14.3	52	8.7	26	6.4	12	2.8	6	5.0	2	2.0
91-100	9	7.2	1	.8	8	2.9	7	2.5	40	6.7	21	3.5	7	1.7	7	1.6			1	1.0
101-110	3	2.4	2	1.6	5	1.8	3	1.1	17	2.8	10	1.7			5	1.2	1	.8	1	1.0
111-120	9	7.2	1	.8	5	1.8	2	.7	11	1.8	8	1.3	3	.7	1	.2			1	1.0
121 AND OVER	10	8.0	2	1.6	4	1.5	4	1.5	8	1.3	12	2.0	1	.2	3	.7	1	.8		
NO ENTRIES	5	4.0	6	4.8	5	1.8	20	7.3	21	3.5	20	3.3			3	.7			2	2.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	57.20	**	38.92		56.85	*	51.17		63.27	**	57.62		56.98	**	52.05		50.88		51.39	
STANDARD DEVIATIONS	38.34		29.16		28.12		30.25		27.74		26.96		18.84		21.04		19.04		21.18	

TABLE A-19

GRADUATE CREDITS BIOLOGICAL SCIENCES

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	74	9.3	52	6.5	426	14.2	333	11.1	116	14.5	97	12.1	75	14.3	59	11.2	18	14.4	18	14.4
11-20	5	.6	3	.4	172	5.7	109	3.6	25	3.1	31	3.9	38	7.2	19	3.6	15	12.0	3	2.4
21-30	1	.1	1	.1	83	2.8	63	2.1	16	2.0	9	1.1	11	2.1	14	2.7	11	8.8	8	6.4
31-40	1	.1			35	1.2	24	.8	4	.5	2	.3	6	1.1	7	1.3	4	3.2	2	1.6
41-50					11	.4	2	.1					2	.4	1	.2	4	3.2		
51-60					7	.2			1	.1			2	.4			2	1.6		
61-70					1								1	.2						
71-80							2	.1												
81 AND OVER					2	.1	1						1	.2			1	.8		
NO ENTRIES	719	89.9	744	93.0	2263	75.4	2466	82.2	638	79.8	661	82.6	389	74.1	425	81.0	70	56.0	94	75.2
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	.68	*	.45		3.16	**	2.10		2.04		1.64		3.52	*	2.42		9.06	**	3.36	
STANDARD DEVIATIONS	2.49		1.86		7.86		6.24		5.55		4.55		8.89		6.65		14.92		7.78	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	23	15.3	18	12.0	73	18.3	46	11.5	8	4.0	15	7.5
11-20	7	4.7	3	2.0	25	6.3	9	2.3	20	10.0	5	2.5
21-30	3	2.0	3	2.0	12	3.0	4	1.0	7	3.5	3	1.5
31-40			1	.7	3	.8	3	.8	4	2.0	2	1.0
41-50			1	.7	3	.8						
51-60												
61-70												
71-80											1	.5
81 AND OVER												
NO ENTRIES	117	78.0	124	82.7	284	71.0	338	84.5	161	80.5	174	87.0
TOTALS	150		150		400		400		200		200	
MEANS	2.08		2.02		3.35	**	1.50		3.37		1.92	
STANDARD DEVIATIONS	4.95		6.29		7.33		4.75		7.86		7.44	

Table A-19 (continued)

GRADUATE CREDITS BIOLOGICAL SCIENCES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	4	3.2	3	2.4	29	10.5	17	6.2	38	6.3	42	7.0	58	14.3	49	11.5	17	14.3	10	10.0
11-20			3	2.4	4	1.5	6	2.2	17	2.8	28	4.7	32	7.9	14	3.3	6	5.0	5	5.0
21-30			4	3.2	4	1.5	4	1.5	33	5.5	35	5.8	9	2.2	9	2.1	2	1.7	5	5.0
31-40			4	3.2			1	.4	19	3.2	20	3.3	4	1.0	5	1.2	2	1.7	2	2.0
41-50			1	.8	1	.4			15	2.5	15	2.5	2	.5	1	.2				
51-60									14	2.3	8	1.3	2	.5						
61-70			1	.8	1	.4			16	2.7	7	1.2	1	.2						
71-80									5	.8	2	.3								
81 AND OVER			1	.8	1	.4			13	2.2	11	1.8	1	.2						
NO ENTRIES	121	96.8	108	86.4	235	85.5	247	89.8	430	71.7	432	72.0	297	73.2	347	81.6	92	77.3	78	78.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	.18	**	4.03		1.89		1.18		9.98		8.24		3.79	**	2.21		2.59		3.31	
STANDARD DEVIATIONS	.96		12.68		7.89		4.44		20.70		17.92		9.46		6.32		6.46		7.86	

TABLE A-20

GRADUATE CREDITS CHEMISTRY

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	26	3.3	10	1.3	415	13.8	261	8.7	79	9.9	59	7.4	73	13.9	54	10.3	14	11.2	16	12.8
11-20	2	.3			104	3.5	48	1.6	8	1.0	10	1.3	19	3.6	14	2.7	10	8.0		
21-30					31	1.0	15	.5					7	1.3	4	.8	1	.8	1	.8
31-40					7	.2	5	.2			1	.1			1	.2	2	1.6		
41-50					2	.1	6	.2			2	.3			1	.2				
51-60					1		1													
61-70					1												1	.8		
71-80																				
81 AND OVER																				
NO ENTRIES	772	96.5	790	98.8	2439	81.3	2664	88.8	713	89.1	728	91.0	426	81.1	451	85.9	97	77.6	108	86.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	.22	**	.07		1.72	**	1.02		.70		.76		1.67		1.33		3.15	**	.91	
STANDARD DEVIATIONS	1.24		.61		4.80		3.99		2.21		3.37		4.33		4.36		8.50		2.87	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	29	19.3	16	10.7	67	16.8	34	8.5	36	18.0	13	6.5
11-20	2	1.3	4	2.7	34	8.5	5	1.3	11	5.5	2	1.0
21-30			1	.7	10	2.5	1	.3	2	1.0	1	.5
31-40					3	.8	1	.3			2	1.0
41-50							1	.3				
51-60							1	.3				
61-70												
71-80												
81 AND OVER												
NO ENTRIES	119	79.3	129	86.0	286	71.5	357	89.3	151	75.5	182	91.0
TOTALS	150		150		400		400		200		200	
MEANS	1.27		1.17		3.14	**	1.07		2.10	*	1.00	
STANDARD DEVIATIONS	2.72		3.55		6.42		4.70		4.55		4.38	

Table A-20 (continued)

GRADUATE CREDITS CHEMISTRY

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	4	3.2	7	5.6	30	10.9	18	6.5	67	11.2	65	10.8	61	15.0	45	10.6	12	10.1	9	9.0
11-20	5	4.0			16	5.8	8	2.9	31	5.2	28	4.7	15	3.7	12	2.8	4	3.4	2	2.0
21-30	1	.8			18	6.5	12	4.4	35	5.8	22	3.7	4	1.0	3	.7	3	2.5	1	1.0
31-40					9	3.3	9	3.3	34	5.7	19	3.2							1	1.0
41-50					2	.7	6	2.2	19	3.2	8	1.3			1	.2				
51-60					1	.4			7	1.2	4	.7								
61-70					1	.4	2	.7	13	2.2	2	.3								
71-80			1	.8	1	.4			3	.5										
81 AND OVER							3	1.1	9	1.5	2	.3								
NO ENTRIES	115	92.0	117	93.6	197	71.6	217	78.9	382	63.7	450	75.0	326	80.3	364	85.6	100	84.0	87	87.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	1.00		.91		5.38		5.49		10.08	**	4.86		1.65		1.31		1.72		1.42	
STANDARD DEVIATIONS	3.84		6.81		11.60		14.30		18.87		11.89		4.13		4.21		4.95		4.96	

TABLE A-21

GRADUATE CREDITS EARTH SCIENCES

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	103	12.9	63	7.9	327	10.9	247	8.2	85	10.6	73	9.1	59	11.2	48	9.1	21	16.8	11	8.8
11-20	4	.5			27	.9	18	.6	6	.8	7	.9	3	.6	4	.8				
21-30					6	.2	1		1	.1										
31-40					2	.1	1		1	.1										
41-50							3	.1							2	.4				
51-60							1													
61-70																				
71-80																				
81 AND OVER																				
NO ENTRIES	693	86.6	737	92.1	2638	87.9	2729	91.0	707	88.4	720	90.0	463	88.2	471	89.7	104	83.2	114	91.2
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	.79	**	.43		.81	**	.63		.78		.64		.71		.79		.92		.48	
STANDARD DEVIATIONS	2.11		1.48		2.63		2.69		2.60		2.11		2.06		3.44		2.05		1.55	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	22	14.7	14	9.3	45	11.3	23	5.8	17	8.5	10	5.0
11-20	3	2.0			7	1.8	2	.5	1	.5		
21-30					2	.5						
31-40												
41-50							1	.3				
51-60												
61-70												
71-80												
81 AND OVER												
NO ENTRIES	125	83.3	136	90.7	346	86.5	374	93.5	182	91.0	190	95.0
TOTALS	150		150		400		400		200		200	
MEANS	1.12	*	.51		1.02	*	.51		.55		.28	
STANDARD DEVIATIONS	2.82		1.60		3.13		2.80		1.86		1.19	

Table A-21 (continued)

GRADUATE CREDITS EARTH SCIENCES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	7	5.6	5	4.0	23	8.4	18	6.5	55	9.2	49	8.2	54	13.3	41	9.6	5	4.2	7	7.0
11-20	4	3.2	2	1.6	1	.4	6	2.2	14	2.3	10	1.7	3	.7	3	.7			1	1.0
21-30					3	1.1	1	.4	2	.3	5	.8								
31-40					1	.4	1	.4	2	.3	3	.5								
41-50					1	.4	1	.4	1	.2	1	.2			2	.5				
51-60											2	.3								
61-70									1	.2	2	.3								
71-80											2	.3								
81 AND OVER			1	.8							1	.2								
NO ENTRIES	114	91.2	117	93.6	246	89.5	248	90.2	525	87.5	525	87.5	349	86.0	379	89.2	114	95.8	92	92.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	.80		1.15		1.09		1.09		1.25		1.97		.85		.85		.23		.54	
STANDARD DEVIATIONS	2.95		7.88		4.62		4.53		4.87		8.57		2.25		3.69		1.10		2.05	

TABLE A-22

GRADUATE CREDITS EDUCATION

	ELEMENTARY				SECONDARY	COMBINED			SECONDARY	UNITARY L			SECONDARY	UNITARY M			SECONDARY	UNITARY H		
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	126	15.8	116	14.5	659	22.0	527	17.6	171	21.4	144	18.0	104	19.8	96	18.3	37	29.6	14	11.2
11-20	113	14.1	101	12.6	398	13.3	365	12.2	94	11.8	104	13.0	98	18.7	57	10.9	23	18.4	19	15.2
21-30	153	19.1	131	16.4	307	10.2	272	9.1	96	12.0	82	10.3	59	11.2	48	9.1	14	11.2	18	14.4
31-40	96	12.0	69	8.6	129	4.3	116	3.9	35	4.4	34	4.3	31	5.9	14	2.7	5	4.0	8	6.4
41-50	45	5.6	28	3.5	33	1.1	37	1.2	12	1.5	9	1.1	9	1.7	14	2.7				
51-60	14	1.8	13	1.6	11	.4	7	.2	2	.3	3	.4	1	.2	1	.2				
61-70	3	.4	8	1.0	8	.3	6	.2	3	.4	2	.3	3	.6						
71-80	2	.3			2	.1	3	.1	1	.1	1	.1			2	.4				
81 AND OVER	1	.1	2	.3	1		1										1	.8		
NO ENTRIES	247	30.9	332	41.5	1452	48.4	1666	55.5	386	48.3	421	52.6	220	41.9	293	55.8	45	36.0	66	52.8
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	16.26	**	13.36		8.36	**	7.46		8.77		8.11		10.20	**	7.57		9.44		8.92	
STANDARD DEVIATIONS	16.11		15.97		11.88		11.66		12.36		11.99		12.65		12.25		12.07		11.60	

	SECONDARY	SEQUEN. L			SECONDARY	SEQUEN. M			SECONDARY	SEQUEN. H		
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	33	22.0	25	16.7	100	25.0	79	19.8	49	24.5	34	17.0
11-20	15	10.0	17	11.3	49	12.3	51	12.8	18	9.0	24	12.0
21-30	11	7.3	16	10.7	33	8.3	24	6.0	18	9.0	9	4.5
31-40	4	2.7	4	2.7	16	4.0	11	2.8	4	2.0	3	1.5
41-50	2	1.3	1	.7	3	.8	6	1.5			1	.5
51-60	1	.7			3	.8			1	.5		
61-70					2	.5	2	.5				
71-80												
81 AND OVER												
NO ENTRIES	84	56.0	87	58.0	194	48.5	227	56.8	110	55.0	129	64.5
TOTALS	150		150		400		400		200		200	
MEANS	6.55		6.64		7.88		6.58		6.03		4.70	
STANDARD DEVIATIONS	10.82		10.24		11.79		10.93		9.58		8.38	

Table A-22 (continued)

GRADUATE CREDITS EDUCATION

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	19	15.2	21	16.8	57	20.7	48	17.5	66	11.0	83	13.8	83	20.4	81	19.1	21	17.6	15	15.0
11-20	14	11.2	11	8.8	46	16.7	46	16.7	40	6.7	73	12.2	87	21.4	52	12.2	11	9.2	5	5.0
21-30	13	10.4	12	9.6	29	10.5	23	8.4	27	4.5	59	9.8	50	12.3	42	9.9	9	7.6	6	6.0
31-40	6	4.8	9	7.2	17	6.2	19	6.9	13	2.2	23	3.8	25	6.2	13	3.1	6	5.0	1	1.0
41-50	1	.8	3	2.4	4	1.5	4	1.5	5	.8	7	1.2	7	1.7	10	2.4	2	1.7	4	4.0
51-60	1	.8			6	2.2	3	1.1	1	.2	4	.7	1	.2	1	.2				
61-70	1	.8			1	.4	1	.4	1	.2	2	.3	3	.7						
71-80			2	1.6	1	.4	1	.4	1	.2	5	.8			2	.5				
81 AND OVER	1	.8			1	.4			2	.3	1	.2								
NO ENTRIES	69	55.2	67	53.6	113	41.1	130	47.3	444	74.0	343	57.2	150	36.9	224	52.7	70	58.8	69	69.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	8.94		9.59		11.31		9.92		4.55	**	8.41		11.18	**	8.11		6.89		5.31	
STANDARD DEVIATIONS	14.61		15.10		15.00		13.73		10.89		13.91		12.86		12.45		11.29		11.08	

TABLE A-23

GRADUATE CREDITS ENGINEERING

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	5	.6	2	.3	18	.6	5	.2			1	.1					1	.8		
11-20																				
21-30					1		1		1	.1										
31-40																				
41-50																				
51-60																				
61-70																				
71-80																				
81 AND OVER																				
NO ENTRIES	795	99.4	798	99.8	2981	99.4	2994	99.8	799	99.9	799	99.9	525	100	525	100	124	99.2	125	100
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	.08		.09		.04		.02		.03		.01						.04			
STANDARD DEVIATIONS	1.32		1.71		.63		.51		.90		.19						.49			

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS									15	7.5	3	1.5
11-20												
21-30											1	.5
31-40												
41-50												
51-60												
61-70												
71-80												
81 AND OVER												
NO ENTRIES	150	100	150	100	400	100	400	100	185	92.5	196	98.0
TOTALS	150		150		400		400		200		200	
MEANS									.41		.21	
STANDARD DEVIATIONS									1.44		1.91	

Table A-23 (continued)

GRADUATE CREDITS ENGINEERING

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	14	11.2	2	1.6	10	3.6	5	1.8	10	1.7	4	.7								
11-20	8	6.4	3	2.4	2	.7	1	.4	12	2.0	7	1.2								
21-30	4	3.2	2	1.6	5	1.8	3	1.1	16	2.7	12	2.0								
31-40	4	3.2	1	.8					7	1.2	4	.7								
41-50			1	.8					5	.8	1	.2								
51-60			1	.8					4	.7	1	.2								
61-70	1	.8																		
71-80	1	.8																		
81 AND OVER									1	.2	1	.2								
NO ENTRIES	93	74.4	115	92.0	258	93.8	266	96.7	545	90.8	570	95.0	406	100	425	100	119	100	100	100
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	4.69	*	1.96		.78		.43		2.39	*	1.28									
STANDARD DEVIATIONS	11.74		8.00		3.75		2.88		9.03		6.60									

TABLE A-24

GRADUATE CREDITS MATHEMATICS

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	162	20.3	133	16.6	575	19.2	478	15.9	102	12.8	100	12.5	107	20.4	97	18.5	26	20.8	16	12.8
11-20	9	1.1	5	.6	196	6.5	96	3.2	14	1.8	16	2.0	29	5.5	12	2.3	9	7.2	6	4.8
21-30	2	.3	1	.1	80	2.7	49	1.6	3	.4	8	1.0	14	2.7	12	2.3	4	3.2	5	4.0
31-40					36	1.2	21	.7			2	.3	4	.8	5	1.0	4	3.2	1	.8
41-50					11	.4	9	.3					3	.6	3	.6			3	2.4
51-60					5	.2							2	.4						
61-70							1													
71-80																				
81 AND OVER							2	.1												
NO ENTRIES	627	78.4	661	82.6	2097	69.9	2344	78.1	681	85.1	674	84.3	366	69.7	396	75.4	82	65.6	94	75.2
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	1.35	*	1.04		3.43	**	2.25		1.07		1.34		3.40		2.55		4.21		3.84	
STANDARD DEVIATIONS	2.93		2.50		7.41		6.27		3.05		4.05		7.64		6.57		8.18		9.29	

	SECONDARY ACCEPTED		SEQUEN. L REJECTED		SECONDARY ACCEPTED		SEQUEN. M REJECTED		SECONDARY ACCEPTED		SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	35	23.3	24	16.0	89	22.3	69	17.3	52	26.0	40	20.0
11-20	6	4.0	2	1.3	44	11.0	12	3.0	36	18.0	13	6.5
21-30	1	.7	1	.7	23	5.8	6	1.5	14	7.0	9	4.5
31-40					7	1.8			10	5.0	5	2.5
41-50					4	1.0	1	.3	1	.5		
51-60					1	.3						
61-70											1	.5
71-80												
81 AND OVER												
NO ENTRIES	108	72.0	123	82.0	232	58.0	312	78.0	87	43.5	132	66.0
TOTALS	150		150		400		400		200		200	
MEANS	2.07		1.26		5.61	**	1.91		8.01	**	4.47	
STANDARD DEVIATIONS	4.08		3.28		9.46		4.86		10.28		9.16	

Table A-24 (continued)

GRADUATE CREDITS MATHEMATICS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	37	29.6	17	13.6	52	18.9	54	19.6	171	28.5	113	18.8	90	22.2	82	19.3	17	14.3	15	15.0
11-20	12	9.6	8	6.4	26	9.5	24	8.7	75	12.5	43	7.2	23	5.7	9	2.1	6	5.0	3	3.0
21-30	3	2.4	10	8.0	33	12.0	29	10.5	51	8.5	69	11.5	11	2.7	10	2.4	3	2.5	2	2.0
31-40	3	2.4	4	3.2	17	6.2	23	8.4	23	3.8	32	5.3	3	.7	5	1.2	1	.8		
41-50					9	3.3	16	5.8	19	3.2	15	2.5	2	.5	3	.7	1	.8		
51-60	1	.8	1	.8	4	1.5	8	2.9	9	1.5	12	2.0	1	.2			1	.8		
61-70					3	1.1	5	1.8	1	.2	5	.8								
71-80					1	.4					1	.2								
81 AND OVER					2	.7	4	1.5	4	.7	2	.3								
NO ENTRIES	69	55.2	85	68.0	128	46.5	112	40.7	247	41.2	308	51.3	276	68.0	316	74.4	90	75.6	80	80.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	5.02		5.36		11.67	*	14.79		9.99		10.18		3.41		2.73		3.36		1.80	
STANDARD DEVIATIONS	8.79		10.38		16.77		19.40		14.49		15.63		7.30		6.94		8.68		4.63	

TABLE A-25

GRADUATE CREDITS PHYSICS

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	43	5.4	13	1.6	431	14.4	259	8.6	72	9.0	64	8.0	75	14.3	59	11.2	31	24.8	10	8.0
11-20	3	.4	1	.1	73	2.4	38	1.3	10	1.3	5	.6	15	2.9	10	1.9	2	1.6	2	1.6
21-30					17	.6	6	.2	2	.3			4	.8	3	.6	1	.8		
31-40	1	.1			3	.1	2	.1					1	.2						
41-50							1													
51-60					1		1													
61-70																				
71-80																				
81 AND OVER																				
NO ENTRIES	753	94.1	786	98.3	2475	82.5	2693	89.8	716	89.5	731	91.4	430	81.9	453	86.3	91	72.8	113	90.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	.40	**	.11		1.37	**	.78		.75		.54		1.49		1.06		1.82		.69	
STANDARD DEVIATIONS	1.98		.88		3.78		2.98		2.60		1.90		4.04		3.25		3.64		2.40	

	SECONDARY ACCEPTED		SEQUEN. L REJECTED		SECONDARY ACCEPTED		SEQUEN. M REJECTED		SECONDARY ACCEPTED		SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	31	20.7	18	12.0	81	20.3	32	8.0	30	15.0	14	7.0
11-20	2	1.3	3	2.0	12	3.0	8	2.0	11	5.5		
21-30	1	.7			1	.3			5	2.5	1	.5
31-40					1	.3			1	.5	1	.5
41-50												
51-60							1	.3				
61-70												
71-80												
81 AND OVER												
NO ENTRIES	116	77.3	129	86.0	305	76.3	359	89.8	153	76.5	184	92.0
TOTALS	150		150		400		400		200		200	
MEANS	1.51		.97		1.73	**	.89		2.49	**	.69	
STANDARD DEVIATIONS	3.39		2.73		3.88		3.76		5.83		3.34	

Table A-25 (continued)

GRADUATE CREDITS PHYSICS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	25	20.0	13	10.4	46	16.7	52	18.9	94	15.7	101	16.8	66	16.3	54	12.7	9	7.6	5	5.0
11-20	7	5.6	2	1.6	17	6.2	19	6.9	33	5.5	31	5.2	12	3.0	8	1.9	3	2.5	2	2.0
21-30	3	2.4			8	2.9	7	2.5	21	3.5	16	2.7	4	1.0	3	.7				
31-40					1	.4	3	1.1	10	1.7	7	1.2					1	.8		
41-50					1	.4	3	1.1	13	2.2	3	.5								
51-60							1	.4	5	.8	2	.3								
61-70							1	.4	7	1.2	1	.2								
71-80					1	.4			5	.8	1	.2								
81 AND OVER									3	.5	1	.2								
NO ENTRIES	90	72.0	110	88.0	201	73.1	189	68.7	409	68.2	437	72.8	324	79.8	360	84.7	106	89.1	93	93.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	2.58	**	.82		3.19		4.08		6.47	**	3.61		1.60		1.17		1.11		.59	
STANDARD DEVIATIONS	5.33		2.51		7.84		9.23		14.98		9.27		3.98		3.40		4.20		2.44	

TABLE A-26

TOTAL GRADUATE CREDITS IN THE SCIENCES

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	238	29.8	174	21.8	733	24.4	659	22.0	195	24.4	172	21.5	134	25.5	105	20.0	29	23.2	25	20.0
11-20	41	5.1	19	2.4	515	17.2	287	9.6	81	10.1	63	7.9	78	14.9	44	8.4	26	20.8	14	11.2
21-30	12	1.5	3	.4	333	11.1	180	6.0	39	4.9	35	4.4	60	11.4	44	8.4	23	18.4	13	10.4
31-40	4	.5	1	.1	134	4.5	97	3.2	14	1.8	15	1.9	24	4.6	26	5.0	14	11.2	6	4.8
41-50	2	.3			56	1.9	29	1.0	4	.5	4	.5	10	1.9	9	1.7	4	3.2	4	3.2
51-60	1	.1			18	.6	19	.6	1	.1	1	.1	6	1.1	8	1.5	4	3.2	1	.8
61-70					13	.4	4	.1					3	.6			2	1.6		
71-80					2	.1	2	.1					1	.2						
81-90					1								1	.2						
91-100					1		1										1	.8		
101-110																				
111-120							1													
121 AND OVER					1								1	.2						
NO ENTRIES	502	62.8	603	75.4	1193	39.8	1721	57.4	466	58.3	510	63.8	207	39.4	289	55.0	22	17.6	62	49.6
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	3.17	**	1.70		10.04	**	6.37		5.07		4.48		10.66	**	7.92		18.21	**	9.09	
STANDARD DEVIATIONS	6.02		3.66		12.90		11.19		8.59		8.46		14.68		12.75		17.10		13.01	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	44	29.3	32	21.3	86	21.5	94	23.5	39	19.5	49	24.5
11-20	27	18.0	10	6.7	111	27.8	39	9.8	59	29.5	20	10.0
21-30	16	10.7	11	7.3	72	18.0	18	4.5	43	21.5	14	7.0
31-40	2	1.3	4	2.7	17	4.3	6	1.5	19	9.5	11	5.5
41-50			1	.7	16	4.0	2	.5	3	1.5	1	.5
51-60			1	.7	1	.3	4	1.0	2	1.0	1	.5
61-70					4	1.0					2	1.0
71-80											1	.5
81-90												
91-100												
101-110												
111-120							1	.3				
121 AND OVER												
NO ENTRIES	61	40.7	91	60.7	93	23.3	236	59.0	35	17.5	101	50.5
TOTALS	150		150		400		400		200		200	
MEANS	7.60		5.70		14.20	**	5.56		15.74	**	8.17	
STANDARD DEVIATIONS	8.97		10.27		13.25		11.06		12.26		13.29	

Table A-26 (continued)

TOTAL GRADUATE CREDITS IN THE SCIENCES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1-10 SEMESTER HOURS	24	19.2	15	12.0	39	14.2	31	11.3	41	6.8	54	9.0	108	26.6	89	20.9	26	21.8	16	16.0
11-20	9	7.2	12	9.6	34	12.4	22	8.0	49	8.2	74	12.3	66	16.3	36	8.5	12	10.1	8	8.0
21-30	18	14.4	15	12.0	47	17.1	35	12.7	86	14.3	123	20.5	49	12.1	34	8.0	11	9.2	10	10.0
31-40	13	10.4	9	7.2	39	14.2	44	16.0	123	20.5	89	14.8	17	4.2	24	5.6	7	5.9	2	2.0
41-50	8	6.4	1	.8	17	6.2	25	9.1	73	12.2	54	9.0	7	1.7	7	1.6	3	2.5	2	2.0
51-60	1	.8	2	1.6	15	5.5	17	6.2	58	9.7	41	6.8	5	1.2	6	1.4	1	.8	2	2.0
61-70			2	1.6	5	1.8	10	3.6	44	7.3	19	3.2	3	.7						
71-80	1	.8	1	.8	3	1.1	6	2.2	29	4.8	17	2.8	1	.2						
81-90	1	.8	2	1.6	5	1.8	6	2.2	12	2.0	11	1.8	1	.2						
91-100					2	.7	4	1.5	13	2.2	6	1.0								
101-110							1	.4	12	2.0	5	.8								
111-120					1	.4	2	.7	4	.7	3	.5								
121 AND OVER			2	1.6	2	.7			9	1.5	4	.7	1	.2						
NO ENTRIES	50	40.0	64	51.2	66	24.0	72	26.2	47	7.8	100	16.7	148	36.5	229	53.9	59	49.6	60	60.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	14.18		14.04		23.53		25.86		40.47	**	29.82		11.20	**	8.04		8.82		7.40	
STANDARD DEVIATIONS	17.54		23.39		23.85		25.96		27.69		25.44		15.13		12.75		12.85		12.74	

TABLE A-27

UNDERGRADUATE GRADES BIOLOGICAL SCIENCES

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY COMBINED ACCEPTED		SECONDARY COMBINED REJECTED		SECONDARY UNITARY L ACCEPTED		SECONDARY UNITARY L REJECTED		SECONDARY UNITARY M ACCEPTED		SECONDARY UNITARY M REJECTED		SECONDARY UNITARY H ACCEPTED		SECONDARY UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	107	13.4	105	13.1	528	17.6	533	17.8	110	13.8	131	16.4	81	15.4	94	17.9	23	18.4	26	20.8
0.1-0.5 GRADE-PT AVERAGE			1	.1	1															
0.6-1.0	14	1.8	13	1.6	31	1.0	35	1.2	7	.9	8	1.0	6	1.1	10	1.9	1	.8	1	.8
1.1-1.5	23	2.9	21	2.6	47	1.6	66	2.2	16	2.0	18	2.3	9	1.7	12	2.3				
1.6-2.0	150	18.8	192	24.0	336	11.2	458	15.3	107	13.4	132	16.5	60	11.4	78	14.9	10	8.0	9	7.2
2.1-2.5	107	13.4	113	14.1	463	15.4	581	19.4	162	20.3	174	21.8	80	15.2	97	18.5	21	16.8	26	20.8
2.6-3.0	237	29.6	212	26.5	820	27.3	798	26.6	232	29.0	203	25.4	156	29.7	129	24.6	33	26.4	38	30.4
3.1-3.5	80	10.0	69	8.6	412	13.7	274	9.1	95	11.9	68	8.5	71	13.5	63	12.0	21	16.8	10	8.0
3.6-4.0	82	10.3	74	9.3	362	12.1	255	8.5	71	8.9	66	8.3	62	11.8	42	8.0	16	12.8	15	12.0
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	2.59	*	2.51		2.75	**	2.58		2.64	*	2.56		2.74	**	2.59		2.84		2.76	
STANDARD DEVIATIONS	.71		.71		.68		.67		.64		.66		.67		.69		.62		.61	

	SECONDARY SEQUEN. L ACCEPTED		SECONDARY SEQUEN. L REJECTED		SECONDARY SEQUEN. M ACCEPTED		SECONDARY SEQUEN. M REJECTED		SECONDARY SEQUEN. H ACCEPTED		SECONDARY SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	22	14.7	18	12.0	84	21.0	80	20.0	53	26.5	41	20.5
0.1-0.5 GRADE-PT AVERAGE					1	.3						
0.6-1.0			2	1.3	1	.3	5	1.2	4	2.0	4	2.0
1.1-1.5	2	1.3	4	2.7	5	1.3	9	2.3	4	2.0	3	1.5
1.6-2.0	16	10.7	21	14.0	34	8.5	49	12.3	15	7.5	35	17.5
2.1-2.5	37	24.7	36	24.0	52	13.0	78	19.5	14	7.0	28	14.0
2.6-3.0	38	25.3	46	30.7	111	27.8	108	27.0	51	25.5	50	25.0
3.1-3.5	23	15.3	16	10.7	64	16.0	42	10.5	24	12.0	15	7.5
3.6-4.0	12	8.0	7	4.7	48	12.0	29	7.3	35	17.5	24	12.0
TOTALS	150		150		400		400		200		200	
MEANS	2.69		2.54		2.83	**	2.60		2.87	**	2.61	
STANDARD DEVIATIONS	.59		.61		.64		.66		.75		.73	

Table A-27 (continued)

UNDERGRADUATE GRADES BIOLOGICAL SCIENCES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	89	71.2	54	43.2	153	55.6	165	60.0	294	49.0	251	41.8	64	15.8	85	20.0	17	14.3	9	9.0
0.1-0.5 GRADE-PT AVERAGE																				
0.6-1.0									2	.3	1	.2	6	1.5	9	2.1			1	1.0
1.1-1.5							3	1.1	3	.5	3	.5	8	2.0	10	2.4	1	.8	2	2.0
1.6-2.0	5	4.0	10	8.0	21	7.6	17	6.2	19	3.2	30	5.0	49	12.1	69	16.2	11	9.2	9	9.0
2.1-2.5	6	4.8	10	8.0	12	4.4	17	6.2	25	4.2	50	8.3	67	16.5	83	19.5	13	10.9	14	14.0
2.6-3.0	12	9.6	26	20.8	35	12.7	27	9.8	72	12.0	118	19.7	126	31.0	95	22.4	30	25.2	34	34.0
3.1-3.5	6	4.8	11	8.8	20	7.3	19	6.9	71	11.8	70	11.7	49	12.1	46	10.8	22	18.5	17	17.0
3.6-4.0	7	5.6	14	11.2	34	12.4	27	9.8	114	19.0	77	12.8	37	9.1	28	6.6	25	21.0	14	14.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	2.86		2.86		2.92		2.86		3.16	**	2.93		2.67	**	2.53		2.97		2.82	
STANDARD DEVIATIONS	.64		.63		.71		.73		.65		.64		.66		.69		.65		.65	

TABLE A-28

UNDERGRADUATE GRADES CHEMISTRY

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	523	65.4	527	65.9	657	21.9	778	25.9	227	28.4	263	32.9	92	17.5	115	21.9	19	15.2	35	28.0
0.1-0.5 GRADE-PT. AVERAGE			1	.1	2	.1	2	.1												
0.6-1.0	19	2.4	28	3.5	72	2.4	117	3.9	26	3.3	33	4.1	13	2.5	19	3.6	1	.8	5	4.0
1.1-1.5	12	1.5	24	3.0	115	3.8	138	4.6	32	4.0	34	4.3	23	4.4	26	5.0	5	4.0	5	4.0
1.6-2.0	73	9.1	99	12.4	622	20.7	682	22.7	190	23.8	174	21.8	125	23.8	112	21.3	30	24.0	27	21.6
2.1-2.5	48	6.0	16	2.0	459	15.3	469	15.6	105	13.1	115	14.4	86	16.4	86	16.4	24	19.2	24	19.2
2.6-3.0	79	9.9	79	9.9	583	19.4	530	17.7	130	16.3	122	15.3	100	19.0	110	21.0	32	25.6	19	15.2
3.1-3.5	20	2.5	9	1.1	279	9.3	166	5.5	52	6.5	36	4.5	55	10.5	30	5.7	10	8.0	7	5.6
3.6-4.0	26	3.3	17	2.1	211	7.0	118	3.9	38	4.8	23	2.9	31	5.9	27	5.1	4	3.2	3	2.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	2.36	**	2.13		2.45	**	2.28		2.31		2.23		2.41		2.34		2.40		2.24	
STANDARD DEVIATIONS	.79		.80		.74		.71		.73		.70		.72		.72		.62		.67	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	40	26.7	38	25.3	55	13.8	74	18.5	56	28.0	46	23.0
0.1-0.5 GRADE-PT. AVERAGE	1	.7					1	.3			1	.5
0.6-1.0	3	2.0	2	1.3	7	1.8	18	4.5	2	1.0	9	4.5
1.1-1.5	12	8.0	12	8.0	13	3.3	17	4.3	5	2.5	4	2.0
1.6-2.0	27	18.0	41	27.3	62	15.5	87	21.8	24	12.0	54	27.0
2.1-2.5	24	16.0	24	16.0	72	18.0	76	19.0	26	13.0	24	12.0
2.6-3.0	24	16.0	20	13.3	97	24.3	83	20.8	47	23.5	40	20.0
3.1-3.5	9	6.0	10	6.7	60	15.0	30	7.5	18	9.0	12	6.0
3.6-4.0	10	6.7	3	2.0	34	8.5	14	3.5	22	11.0	10	5.0
TOTALS	150		150		400		400		200		200	
MEANS	2.34		2.20		2.60	**	2.31		2.68	**	2.30	
STANDARD DEVIATIONS	.78		.65		.70		.71		.71		.74	

Table A-28 (continued)

UNDERGRADUATE GRADES CHEMISTRY

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	30	24.0	42	33.6	75	27.3	95	34.5	110	18.3	122	20.3	57	14.0	90	21.2	35	29.4	25	25.0
0.1-0.5 GRADE-PT. AVERAGE			1	.8																
0.6-1.0	2	1.6	1	.8	2	.7	1	.4	4	.7	5	.8	11	2.7	17	4.0	2	1.7	2	2.0
1.1-1.5	3	2.4	3	2.4	3	1.1	7	2.5	4	.7	7	1.2	18	4.4	26	6.1	5	4.2		
1.6-2.0	20	16.0	18	14.4	26	9.5	29	10.5	48	8.0	94	15.7	105	25.9	94	22.1	20	16.8	18	18.0
2.1-2.5	12	9.6	12	9.6	23	8.4	34	12.4	66	11.0	83	13.8	77	19.0	74	17.4	9	7.6	12	12.0
2.6-3.0	28	22.4	19	15.2	60	21.8	40	14.5	142	23.7	114	19.0	83	20.4	83	19.5	17	14.3	27	27.0
3.1-3.5	17	13.6	14	11.2	42	15.3	27	9.8	96	16.0	89	14.8	40	9.9	23	5.4	15	12.6	7	7.0
3.6-4.0	13	10.4	15	12.0	44	16.0	42	15.3	130	21.7	86	14.3	15	3.7	18	4.2	16	13.4	9	9.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	2.66		2.67		2.90		2.78		2.97	**	2.75		2.35		2.28		2.65		2.59	
STANDARD DEVIATIONS	.74		.81		.70		.76		.68		.73		.68		.71		.84		.69	

TABLE A-29

UNDERGRADUATE GRADES EARTH SCIENCES

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY COMBINED ACCEPTED		SECONDARY COMBINED REJECTED		SECONDARY UNITARY L ACCEPTED		SECONDARY UNITARY L REJECTED		SECONDARY UNITARY M ACCEPTED		SECONDARY UNITARY M REJECTED		SECONDARY UNITARY H ACCEPTED		SECONDARY UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	407	50.9	415	51.9	1908	63.6	1895	63.2	493	61.6	502	62.8	332	63.2	308	58.7	82	65.6	84	67.2
0.1-0.5 GRADE PT.AVERAGE							1				1	.1								
0.6-1.0	11	1.4	7	.9	15	.5	21	.7	6	.8	2	.3	3	.6	5	1.0				
1.1-1.5	4	.5	8	1.0	8	.3	9	.3	5	.6	4	.5			3	.6				
1.6-2.0	81	10.1	92	11.5	234	7.8	254	8.5	75	9.4	72	9.0	33	6.4	45	8.6	11	8.8	9	7.2
2.1-2.5	49	6.1	51	6.4	110	3.7	154	5.1	32	4.0	40	5.0	25	4.8	24	4.6	3	2.4	5	4.0
2.6-3.0	130	16.3	132	16.5	418	13.9	410	13.6	112	14.1	113	14.1	84	16.0	82	15.6	20	16.0	17	13.6
3.1-3.5	46	5.8	42	5.3	111	3.7	92	3.1	35	4.4	32	4.0	22	4.2	17	3.2	5	4.0	4	3.2
3.6-4.0	72	9.0	53	6.6	196	6.5	164	5.5	42	5.3	34	4.3	26	5.0	41	7.8	4	3.2	6	4.8
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	2.72	*	2.62		2.72	*	2.64		2.63		2.62		2.72		2.70		2.66		2.71	
STANDARD DEVIATIONS	.76		.72		.71		.70		.72		.67		.65		.74		.61		.64	

	SECONDARY SEQUEN. L ACCEPTED		SECONDARY SEQUEN. L REJECTED		SECONDARY SEQUEN. M ACCEPTED		SECONDARY SEQUEN. M REJECTED		SECONDARY SEQUEN. H ACCEPTED		SECONDARY SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	99	66.0	92	61.3	246	61.5	263	65.8	133	66.5	138	69.0
0.1-0.5 GRADE PT.AVERAGE												
0.6-1.0	1	.7	2	1.3	1	.3	1	.3			2	1.0
1.1-1.5			1	.7								
1.6-2.0	14	9.3	13	8.7	29	7.2	34	8.5	9	4.5	13	6.5
2.1-2.5	10	6.7	7	4.7	11	2.8	21	5.3	4	2.0	10	5.0
2.6-3.0	17	11.3	24	16.0	64	16.0	52	13.0	19	9.5	22	11.0
3.1-3.5	3	2.0	5	3.3	15	3.8	6	1.5	9	4.5	3	1.5
3.6-4.0	6	4.0	6	4.0	34	8.5	23	5.8	26	13.0	12	6.0
TOTALS	150		150		400		400		200		200	
MEANS	2.54		2.57		2.79		2.65		3.06	**	2.66	
STANDARD DEVIATIONS	.68		.70		.70		.68		.72		.75	

Table A-29 (continued)

UNDERGRADUATE GRADES EARTH SCIENCES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	85	68.0	85	68.0	193	70.2	216	78.5	448	74.7	427	71.2	243	59.9	233	54.8	89	74.8	75	75.0
0.1-0.5 GRADE PT.AVERAGE																				
0.6-1.0			1	.8			1	.4			3	.5	3	.7	5	1.2				
1.1-1.5	1	.8													2	.5			1	1.0
1.6-2.0	7	5.6	7	5.6	9	3.3	8	2.9	14	2.3	19	3.2	29	7.1	42	9.9	4	3.4	3	3.0
2.1-2.5	5	4.0	2	1.6	2	.7	4	1.5	6	1.0	14	2.3	22	5.4	22	5.2	3	2.5	2	2.0
2.6-3.0	14	11.2	15	12.0	27	9.8	22	8.0	51	8.5	55	9.2	73	18.0	71	16.7	11	9.2	11	11.0
3.1-3.5	4	3.2	4	3.2	15	5.5	11	4.0	25	4.2	22	3.7	16	3.9	15	3.5	6	5.0	2	2.0
3.6-4.0	9	7.2	11	8.8	29	10.5	13	4.7	56	9.3	60	10.0	20	4.9	35	8.2	6	5.0	6	6.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	2.80		2.88		3.10		2.88		3.12		3.03		2.68		2.68		2.88		2.86	
STANDARD DEVIATIONS	.71		.76		.66		.71		.65		.72		.65		.75		.64		.69	

TABLE A-30

UNDERGRADUATE GRADES EDUCATION

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	77	9.6	44	5.5	229	7.6	193	6.4	57	7.1	53	6.6	46	8.8	40	7.6	10	8.0	8	6.4
0.1-0.5 GRADE-PT.AVERAGE			1	.1																
0.6-1.0					1		2	.1	1	.1	1	.1								
1.1-1.5	4	.5	1	.1	1		7	.2			2	.3			2	.4				
1.6-2.0	17	2.1	29	3.6	87	2.9	117	3.9	23	2.9	33	4.1	15	2.8	15	2.8	6	4.8	5	4.0
2.1-2.5	83	10.4	124	15.5	400	13.3	532	17.7	127	15.9	143	17.9	60	11.4	93	17.7	16	12.8	21	16.8
2.6-3.0	269	33.6	312	39.0	1009	33.7	1095	36.5	283	35.4	306	38.3	186	35.4	181	34.5	41	32.8	41	32.8
3.1-3.5	244	30.5	225	28.1	883	29.4	784	26.1	235	29.4	185	23.1	151	28.8	142	27.0	36	28.8	37	29.6
3.6-4.0	106	13.3	64	8.0	390	13.0	270	9.0	74	9.3	77	9.6	67	12.8	52	9.9	16	12.8	13	10.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	3.03	**	2.91		2.99	**	2.89		2.94	*	2.88		3.00	**	2.92		2.97		2.94	
STANDARD DEVIATIONS	.49		.48		.50		.50		.49		.51		.49		.50		.52		.50	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	12	8.0	6	4.0	31	7.8	22	5.5	18	9.0	15	7.5
0.1-0.5 GRADE-PT.AVERAGE												
0.6-1.0												
1.1-1.5			1	.7	1	.3	1	.3				
1.6-2.0	4	2.7	3	2.0	9	2.3	11	2.8	1	.5	7	3.5
2.1-2.5	17	11.3	36	24.0	41	10.3	67	16.8	19	9.5	37	18.5
2.6-3.0	51	34.0	53	35.3	138	34.5	160	40.3	51	25.5	60	30.0
3.1-3.5	48	32.0	40	26.7	118	29.5	106	26.5	75	37.5	64	32.0
3.6-4.0	18	12.0	11	7.3	62	15.5	33	8.3	36	18.0	17	8.5
TOTALS	150		150		400		400		200		200	
MEANS	3.01	*	2.86		3.04	**	2.91		3.11	**	2.93	
STANDARD DEVIATIONS	.48		.49		.49		.47		.50		.50	

Table A-30 (continued)

UNDERGRADUATE GRADES EDUCATION

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	64	51.2	54	43.2	90	32.7	93	33.8	343	57.2	272	45.3	39	9.6	35	8.2	7	5.9	5	5.0
0.1-0.5 GRADE-PT.AVERAGE																				
0.6-1.0			1	.8							1	.2								
1.1-1.5															2	.5				
1.6-2.0	2	1.6	4	3.2	11	4.0	6	2.2			8	1.3	14	3.5	13	3.1	1	.8	2	2.0
2.1-2.5	8	6.4	6	4.8	18	6.5	18	6.6	28	4.7	34	5.7	48	11.8	86	20.2	12	10.1	7	7.0
2.6-3.0	15	12.0	22	17.6	52	18.9	59	21.5	64	10.7	107	17.8	152	37.4	156	36.7	34	28.6	25	25.0
3.1-3.5	20	16.0	25	20.0	60	21.8	54	19.6	85	14.2	119	19.8	111	27.3	106	24.9	40	33.6	36	36.0
3.6-4.0	16	12.8	13	10.4	44	16.0	45	16.4	80	13.3	59	9.8	42	10.3	27	6.4	25	21.0	25	25.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	3.13		3.03		3.08		3.11		3.19	**	3.08		2.96	**	2.85		3.14		3.19	
STANDARD DEVIATIONS	.55		.59		.58		.53		.53		.50		.48		.48		.48		.49	

TABLE A-31

UNDERGRADUATE GRADES ENGINEERING

	ELEMENTARY				SECONDARY	COMBINED			SECONDARY	UNITARY L			SECONDARY	UNITARY M			SECONDARY	UNITARY H		
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	799	99.9	797	99.6	2988	99.6	2987	99.6	797	99.6	797	99.6	525	100	522	99.4	124	99.2	125	100
0.1-0.5 GRADE PT.AVERAGE																				
0.6-1.0																				
1.1-1.5			1	.1	1		1													
1.6-2.0					1		1		1	.1	1	.1								
2.1-2.5					4	.1	7	.2	1	.1	2	.3			2	.4				
2.6-3.0			2	.3	1		1								1	.2				
3.1-3.5					3	.1	2	.1												
3.6-4.0	1	.1			2	.1	1		1	.1							1	.8		
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	3.80		2.30		2.72		2.49		2.63		2.13				2.47		3.80			
STANDARD DEVIATIONS			.70		.75		.63		.85		.23				.23					

	SECONDARY	SEQUEN. L			SECONDARY	SEQUEN. M			SECONDARY	SEQUEN. H		
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	149	99.3	149	99.3	398	99.5	399	99.8	199	99.5	199	99.5
0.1-0.5 GRADE PT.AVERAGE												
0.6-1.0												
1.1-1.5												
1.6-2.0												
2.1-2.5			1	.7	1	.3						
2.6-3.0					1	.3						
3.1-3.5	1	.7					1	.3	1	.5		
3.6-4.0											1	.5
TOTALS	150		150		400		400		200		200	
MEANS	3.30		2.30		2.55		3.30		3.30		3.80	
STANDARD DEVIATIONS					.25							

Table A-31 (continued)

UNDERGRADUATE GRADES ENGINEERING

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	77	61.6	113	90.4	256	93.1	254	92.4	555	92.5	565	94.2	406	100	422	99.3	119	100	100	100
0.1-0.5 GRADE PT.AVERAGE																				
0.6-1.0																				
1.1-1.5	2	1.6																		
1.6-2.0	2	1.6	2	1.6	1	.4	1	.4			1	.2								
2.1-2.5	3	2.4	1	.8			2	.7	2	.3	3	.5			2	.5				
2.6-3.0	16	12.8	6	4.8	9	3.3	9	3.3	15	2.5	13	2.2			1	.2				
3.1-3.5	15	12.0	2	1.6	4	1.5	4	1.5	16	2.7	9	1.5								
3.6-4.0	10	8.0	1	.8	5	1.8	5	1.8	12	2.0	9	1.5								
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	3.03		2.76		3.12		3.04		3.22		3.11				2.47					
STANDARD DEVIATIONS	.62		.55		.51		.54		.43		.52				.23					

TABLE A-32

UNDERGRADUATE GRADES MATHEMATICS

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	155	19.4	164	20.5	282	9.4	304	10.1	111	13.9	120	15.0	50	9.5	46	8.8	22	17.6	11	8.8
0.1-0.5 GRADE-PT. AVERAGE			1	.1	3	.1	2	.1	3	.4	1	.1								
0.6-1.0	17	2.1	27	3.4	70	2.3	86	2.9	33	4.1	25	3.1	11	2.1	17	3.2	2	1.6	4	3.2
1.1-1.5	18	2.3	30	3.8	89	3.0	129	4.3	30	3.8	47	5.9	13	2.5	21	4.0	5	4.0	5	4.0
1.6-2.0	133	16.6	187	23.4	462	15.4	615	20.5	160	20.0	192	24.0	78	14.9	99	18.9	13	10.4	23	18.4
2.1-2.5	91	11.4	95	11.9	575	19.2	661	22.0	151	18.9	145	18.1	108	20.6	124	23.6	26	20.8	25	20.0
2.6-3.0	214	26.8	164	20.5	823	27.4	692	23.1	200	25.0	169	21.1	143	27.2	104	19.8	39	31.2	30	24.0
3.1-3.5	70	8.8	55	6.9	370	12.3	293	9.8	48	6.0	49	6.1	67	12.8	61	11.6	10	8.0	19	15.2
3.6-4.0	102	12.8	77	9.6	326	10.9	218	7.3	64	8.0	52	6.5	55	10.5	53	10.1	8	6.4	8	6.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	2.63	**	2.44		2.61	**	2.45		2.41		2.34		2.62	**	2.50		2.56		2.51	
STANDARD DEVIATIONS	.75		.79		.72		.71		.75		.73		.70		.75		.64		.72	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	17	11.3	17	11.3	17	4.3	33	8.3	7	3.5	11	5.5
0.1-0.5 GRADE-PT. AVERAGE							1	.3				
0.6-1.0	4	2.7	7	4.7	5	1.3	5	1.3	1	.5	6	3.0
1.1-1.5	4	2.7	10	6.7	12	3.0	13	3.3	2	1.0	5	2.5
1.6-2.0	26	17.3	34	22.7	57	14.3	86	21.5	15	7.5	29	14.5
2.1-2.5	28	18.7	24	16.0	75	18.8	89	22.3	25	12.5	44	22.0
2.6-3.0	40	26.7	39	26.0	125	31.3	99	24.8	59	29.5	62	31.0
3.1-3.5	18	12.0	11	7.3	58	14.5	52	13.0	57	28.5	25	12.5
3.6-4.0	13	8.7	8	5.3	51	12.8	22	5.5	34	17.0	18	9.0
TOTALS	150		150		400		400		200		200	
MEANS	2.56	*	2.34		2.69	**	2.49		2.96	**	2.59	
STANDARD DEVIATIONS	.71		.74		.69		.66		.61		.69	

Table A-32 (continued)

UNDERGRADUATE GRADES MATHEMATICS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	15	12.0	27	21.6	8	2.9	24	8.7	50	8.3	67	11.2	34	8.4	37	8.7	16	13.4	9	9.0
0.1-0.5 GRADE-PT. AVERAGE			1	.8																
0.6-1.0	2	1.6	2	1.6	2	.7	3	1.1	1	.2	1	.2	11	2.7	16	3.8			1	1.0
1.1-1.5	1	.8	2	1.6	3	1.1	5	1.8	9	1.5	9	1.5	13	3.2	18	4.2			3	3.0
1.6-2.0	10	8.0	14	11.2	31	11.3	20	7.3	50	8.3	58	9.7	70	17.2	88	20.7	8	6.7	11	11.0
2.1-2.5	14	11.2	10	8.0	42	15.3	48	17.5	66	11.0	83	13.8	91	22.4	101	23.8	17	14.3	23	23.0
2.6-3.0	45	36.0	22	17.6	69	25.1	70	25.5	119	19.8	152	25.3	113	27.8	91	21.4	30	25.2	13	13.0
3.1-3.5	20	16.0	25	20.0	52	18.9	47	17.1	132	22.0	110	18.3	46	11.3	39	9.2	21	17.6	22	22.0
3.6-4.0	18	14.4	22	17.6	68	24.7	58	21.1	173	28.8	120	20.0	28	6.9	35	8.2	27	22.7	18	18.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	2.85		2.86		2.93		2.90		3.04	**	2.91		2.52	*	2.43		3.00	*	2.80	
STANDARD DEVIATIONS	.65		.80		.70		.69		.70		.67		.68		.73		.62		.74	

TABLE A-33

UNDERGRADUATE GRADES PHYSICS

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	530	66.3	558	69.8	1092	36.4	1146	38.2	361	45.1	352	44.0	179	34.1	200	38.1	44	35.2	59	47.2
0.1-0.5 GRADE-PT. AVERAGE					3	.1	4	.1	2	.3	1	.1			1	.2				
0.6-1.0	11	1.4	9	1.1	79	2.6	131	4.4	20	2.5	35	4.4	17	3.2	20	3.8	3	2.4	5	4.0
1.1-1.5	10	1.3	15	1.9	109	3.6	134	4.5	33	4.1	29	3.6	23	4.4	31	5.9	6	4.8	6	4.8
1.6-2.0	90	11.3	93	11.6	519	17.3	596	19.9	151	18.9	146	18.3	99	18.9	97	18.5	29	23.2	21	16.8
2.1-2.5	21	2.6	23	2.9	375	12.5	352	11.7	64	8.0	83	10.4	68	13.0	56	10.7	17	13.6	14	11.2
2.6-3.0	97	12.1	77	9.6	586	19.5	473	15.8	121	15.1	115	14.4	90	17.1	73	13.9	21	16.8	14	11.2
3.1-3.5																				
3.6-4.0	41	5.1	25	3.1	237	7.9	164	5.5	48	6.0	39	4.9	49	9.3	47	9.0	5	4.0	6	4.8
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	2.44	*	2.30		2.38	**	2.22		2.28		2.21		2.36		2.29		2.21		2.18	
STANDARD DEVIATIONS	.78		.74		.75		.75		.77		.76		.79		.83		.66		.76	

	SECONDARY ACCEPTED		SEQUEN. L REJECTED		SECONDARY ACCEPTED		SEQUEN. M REJECTED		SECONDARY ACCEPTED		SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	58	38.7	44	29.3	123	30.8	134	33.5	62	31.0	63	31.5
0.1-0.5 GRADE-PT. AVERAGE											1	.5
0.6-1.0	5	3.3	8	5.3	12	3.0	16	4.0	4	2.0	9	4.5
1.1-1.5	5	3.3	4	2.7	13	3.3	25	6.3	2	1.0	10	5.0
1.6-2.0	30	20.0	41	27.3	41	10.3	82	20.5	22	11.0	41	20.5
2.1-2.5	21	14.0	22	14.7	67	16.8	67	16.8	29	14.5	26	13.0
2.6-3.0	23	15.3	23	15.3	104	26.0	57	14.3	57	28.5	41	20.5
3.1-3.5												
3.6-4.0	8	5.3	8	5.3	4C	10.0	19	4.8	24	12.0	9	4.5
TOTALS	150		150		400		400		200		200	
MEANS	2.26		2.18		2.52	**	2.18		2.63	**	2.21	
STANDARD DEVIATIONS	.71		.71		.74		.71		.71		.73	

Table A-33 (continued)

UNDERGRADUATE GRADES PHYSICS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	40	32.0	64	51.2	102	37.1	110	40.0	217	36.2	215	35.8	115	28.3	157	36.9	64	53.8	43	43.0
0.1-0.5 GRADE-PT. AVERAGE											1	.2			1	.2				
0.6-1.0	1	.8	1	.8	1	.4	2	.7	4	.7	4	.7	10	2.5	19	4.5	7	5.9	1	1.0
1.1-1.5	2	1.6	4	3.2	9	3.3	6	2.2	16	2.7	19	3.2	19	4.7	25	5.9	4	3.4	6	6.0
1.6-2.0	17	13.6	9	7.2	26	9.5	28	10.2	60	10.0	75	12.5	88	21.7	86	20.2	11	9.2	11	11.0
2.1-2.5	18	14.4	11	8.8	32	11.6	40	14.5	49	8.2	58	9.7	62	15.3	43	10.1	6	5.0	13	13.0
2.6-3.0	27	21.6	23	18.4	51	18.5	52	18.9	132	22.0	123	20.5	79	19.5	60	14.1	11	9.2	13	13.0
3.1-3.5																				
3.6-4.0	20	16.0	13	10.4	54	19.6	37	13.5	122	20.3	105	17.5	33	8.1	34	8.0	16	13.4	13	13.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	2.67		2.64		2.78		2.65		2.81		2.70		2.34		2.23		2.47		2.53	
STANDARD DEVIATIONS	.75		.77		.80		.75		.80		.81		.73		.82		1.04		.84	

TABLE A-34

GRADUATE GRADES BIOLOGICAL SCIENCES

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	721	90.1	744	93.0	2263	75.4	2476	82.5	638	79.8	663	82.9	389	74.1	425	81.0	71	56.8	94	75.2
0.1-0.5 GRADE-PT AVERAGE							1													
0.6-1.0			1	.1	1		3	.1			1	.1	1	.2	1	.2				
1.1-1.5							2	.1												
1.6-2.0	7	.9	5	.6	39	1.3	55	1.8	14	1.7	14	1.8	8	1.5	12	2.3	2	1.6	5	4.0
2.1-2.5	2	.3	1	.1	39	1.3	32	1.1	15	1.9	6	.8	9	1.7	8	1.5	1	.8	2	1.6
2.6-3.0	35	4.4	26	3.3	235	7.8	198	6.6	56	7.0	53	6.6	40	7.6	29	5.5	17	13.6	10	8.0
3.1-3.5	8	1.0	6	.8	183	6.1	110	3.7	28	3.5	25	3.1	35	6.7	27	5.1	15	12.0	9	7.2
3.6-4.0	27	3.4	17	2.1	240	8.0	123	4.1	49	6.1	38	4.8	43	8.2	23	4.4	19	15.2	5	4.0
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	3.09		3.02		3.16	**	2.98		3.05		3.03		3.14		2.99		3.24	*	2.91	
STANDARD DEVIATIONS	.61		.66		.57		.64		.63		.64		.60		.66		.51		.63	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	117	78.0	124	82.7	285	71.3	341	85.3	162	81.0	175	87.5
0.1-0.5 GRADE-PT AVERAGE											1	.5
0.6-1.0												
1.1-1.5			1	.7								
1.6-2.0	3	2.0			4	1.0	5	1.3	1	.5	4	2.0
2.1-2.5	2	1.3	3	2.0	2	.5	2	.5	1	.5	1	.5
2.6-3.0	14	9.3	16	10.7	36	9.0	26	6.5	7	3.5	10	5.0
3.1-3.5	7	4.7	3	2.0	29	7.3	8	2.0	15	7.5	7	3.5
3.6-4.0	7	4.7	3	2.0	44	11.0	18	4.5	14	7.0	2	1.0
TOTALS	150		150		400		400		200		200	
MEANS	2.96		2.82		3.27	*	3.07		3.33	**	2.74	
STANDARD DEVIATIONS	.60		.53		.51		.59		.47		.75	

Table A-34 (continued)

GRADUATE GRADES BIOLOGICAL SCIENCES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS CR ZERO	121	96.8	108	86.4	235	85.5	247	89.8	436	72.7	434	72.3	297	73.2	347	81.6	92	77.3	78	78.0
0.1-0.5 GRADE-PT AVERAGE																				
0.6-1.0															1	.2	1	.8		
1.1-1.5																				
1.6-2.0			1	.8	2	.7			1	.2	8	1.3	5	1.2	10	2.4	3	2.5	2	2.0
2.1-2.5			1	.8	3	1.1	1	.4	5	.8	7	1.2	8	2.0	4	.9	1	.8	4	4.0
2.6-3.0	3	2.4	3	2.4	13	4.7	11	4.0	23	3.8	29	4.8	36	8.9	25	5.9	4	3.4	4	4.0
3.1-3.5			7	5.6	8	2.9	4	1.5	54	9.0	59	9.8	26	6.4	22	5.2	9	7.6	5	5.0
3.6-4.0	1	.8	5	4.0	14	5.1	12	4.4	81	13.5	63	10.5	34	8.4	16	3.8	9	7.6	7	7.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	3.05		3.13		3.07		3.23		3.44	**	3.29		3.15		2.97		3.10		3.05	
STANDARD DEVIATIONS	.43		.62		.65		.55		.42		.53		.56		.66		.77		.67	

TABLE A-35

GRADUATE GRADES CHEMISTRY

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	774	96.8	791	98.9	2443	81.4	2676	89.2	713	89.1	730	91.3	426	81.1	452	86.1	100	80.0	108	86.4
0.1-0.5 GRADE-PT. AVERAGE																				
0.6-1.0			1	.1	5	.2	1				1	.1								
1.1-1.5					2	.1	2	.1	2	.3									1	.8
1.6-2.0	1	.1	1	.1	66	2.2	47	1.6	12	1.5	18	2.3	12	2.3	11	2.1	3	2.4	1	.8
2.1-2.5	2	.3			29	1.0	30	1.0	6	.8	3	.4	3	.6	6	1.1	3	2.4	2	1.6
2.6-3.0	10	1.3	5	.6	190	6.3	127	4.2	37	4.6	29	3.6	36	6.9	29	5.5	5	4.0	5	4.0
3.1-3.5	2	.3			97	3.2	48	1.6	6	.8	7	.9	21	4.0	9	1.7	3	2.4	3	2.4
3.6-4.0	11	1.4	2	.3	168	5.6	69	2.3	24	3.0	12	1.5	27	5.1	18	3.4	11	8.8	5	4.0
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	3.18		2.69		3.02	**	2.88		2.87		2.71		3.04		2.92		3.12		2.98	
STANDARD DEVIATIONS	.59		.87		.68		.66		.71		.71		.62		.66		.72		.72	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	119	79.3	130	86.7	287	71.8	357	89.3	154	77.0	182	91.0
0.1-0.5 GRADE-PT. AVERAGE												
0.6-1.0					2	.5						
1.1-1.5											1	.5
1.6-2.0	8	5.3	2	1.3	11	2.8	5	1.3	1	.5	4	2.0
2.1-2.5	1	.7	5	3.3	3	.8	5	1.3	2	1.0	1	.5
2.6-3.0	12	8.0	9	6.0	35	8.8	16	4.0	17	8.5	6	3.0
3.1-3.5	3	2.0	3	2.0	27	6.8	7	1.8	11	5.5	2	1.0
3.6-4.0	7	4.7	1	.7	35	8.8	10	2.5	15	7.5	4	2.0
TOTALS	150		150		400		400		200		200	
MEANS	2.80		2.70		3.08		2.94		3.20	*	2.74	
STANDARD DEVIATIONS	.71		.49		.68		.63		.50		.78	

Table A-35 (continued)

GRADUATE GRADES CHEMISTRY

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	115	92.0	117	93.6	198	72.0	217	78.9	385	64.2	452	75.3	326	80.3	365	85.9	100	84.0	87	87.0
0.1-0.5 GRADE-PT. AVERAGE																				
0.6-1.0																				
1.1-1.5					1	.4			2	.3	2	.3								
1.6-2.0	1	.8	1	.8	5	1.8	2	.7	8	1.3	14	2.3	9	2.2	9	2.1	3	2.5	2	2.0
2.1-2.5					4	1.5	2	.7	7	1.2	8	1.3	3	.7	5	1.2			1	1.0
2.6-3.0	4	3.2	2	1.6	23	8.4	17	6.2	72	12.0	62	10.3	27	6.7	22	5.2	9	7.6	7	7.0
3.1-3.5	1	.8	2	1.6	21	7.6	12	4.4	59	9.8	29	4.8	18	4.4	8	1.9	3	2.5	1	1.0
3.6-4.0	4	3.2	3	2.4	23	8.4	25	9.1	67	11.2	33	5.5	23	5.7	16	3.8	4	3.4	2	2.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	3.15		3.18		3.12		3.28		3.18	**	2.98		3.07		2.94		2.93		2.80	
STANDARD DEVIATIONS	.63		.65		.60		.54		.54		.61		.62		.67		.62		.58	

TABLE A-36

GRADUATE GRADES EARTH SCIENCES

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	698	87.3	737	92.1	2659	88.6	2747	91.6	707	88.4	726	90.8	466	88.8	471	89.7	104	83.2	114	91.2
0.1-0.5 GRADE PT.AVERAGE					1				1	.1										
0.6-1.0					1		1						1	.2						
1.1-1.5																				
1.6-2.0	9	1.1	4	.5	38	1.3	35	1.2	14	1.8	13	1.6	5	1.0	6	1.1	4	3.2	2	1.6
2.1-2.5	3	.4	1	.1	18	.6	10	.3	4	.5	4	.5	1	.2	2	.4				
2.6-3.0	32	4.0	30	3.8	134	4.5	103	3.4	37	4.6	29	3.6	21	4.0	18	3.4	10	8.0	6	4.8
3.1-3.5	11	1.4	6	.8	46	1.5	26	.9	12	1.5	8	1.0	12	2.3	8	1.5	3	2.4		
3.6-4.0	47	5.9	22	2.8	103	3.4	78	2.6	25	3.1	20	2.5	19	3.6	20	3.8	4	3.2	3	2.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	3.21		3.11		3.02		2.99		2.93		2.92		3.10		3.09		2.87		2.89	
STANDARD DEVIATIONS	.64		.56		.66		.67		.71		.68		.66		.67		.64		.66	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	125	83.3	136	90.7	352	88.0	374	93.5	193	96.5	190	95.0
0.1-0.5 GRADE PT.AVERAGE												
0.6-1.0												
1.1-1.5												
1.6-2.0	1	.7	4	2.7	3	.8	3	.8				
2.1-2.5	3	2.0			3	.8	2	.5	1	.5		
2.6-3.0	12	8.0	8	5.3	20	5.0	11	2.8	3	1.5	5	2.5
3.1-3.5	2	1.3	1	.7	4	1.0	3	.8				
3.6-4.0	7	4.7	1	.7	18	4.5	7	1.8	3	1.5	5	2.5
TOTALS	150		150		400		400		200		200	
MEANS	3.02 *		2.62		3.12		2.97		3.16		3.30	
STANDARD DEVIATIONS	.56		.58		.60		.63		.58		.50	

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Table A-36 (continued)

GRADUATE GRADES EARTH SCIENCES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	114	91.2	117	93.6	246	89.5	249	90.5	532	88.7	526	87.7	351	86.5	379	89.2	115	96.6	92	92.0
0.1-0.5 GRADE PT.AVERAGE											1	.2								
0.6-1.0													1	.2						
1.1-1.5																				
1.6-2.0			1	.8	1	.4	1	.4	2	.3	3	.5	4	1.0	3	.7	1	.8	3	3.0
2.1-2.5					1	.4			1	.2	4	.7	1	.2	2	.5				
2.6-3.0	1	.8	3	2.4	11	4.0	5	1.8	15	2.5	21	3.5	20	4.9	14	3.3	1	.8	4	4.0
3.1-3.5	2	1.6	2	1.6	7	2.5	6	2.2	14	2.3	19	3.2	10	2.5	7	1.6	2	1.7	1	1.0
3.6-4.0	8	6.4	2	1.6	9	3.3	14	5.1	36	6.0	26	4.3	19	4.7	20	4.7				
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	3.62	*	3.05		3.04	*	3.42		3.40	*	3.18		3.12		3.19		2.80		2.49	
STANDARD DEVIATIONS	.32		.61		.72		.50		.50		.64		.66		.63		.61		.55	

TABLE A-37

GRADUATE GRADES EDUCATION

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	255	31.9	338	42.3	1479	49.3	1682	56.1	393	49.1	421	52.6	222	42.3	295	56.2	47	37.6	67	53.6
0.1-0.5																				
0.6-1.0			1	.1	2	.1														
1.1-1.5					1		1		1	.1										
1.6-2.0	7	.9	7	.9	54	1.8	40	1.3	17	2.1	10	1.3	10	1.9	9	1.7	2	1.6	2	1.6
2.1-2.5	21	2.6	21	2.6	54	1.8	49	1.6	18	2.3	14	1.8	16	3.0	7	1.3	5	4.0	1	.8
2.6-3.0	120	15.0	125	15.6	468	15.6	468	15.6	136	17.0	134	16.8	80	15.2	88	16.8	25	20.0	18	14.4
3.1-3.5	226	28.3	200	25.0	554	18.5	480	16.0	144	18.0	141	17.6	113	21.5	84	16.0	23	18.4	19	15.2
3.6-4.0	171	21.4	108	13.5	388	12.9	280	9.3	91	11.4	80	10.0	84	16.0	42	8.0	23	18.4	18	14.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	3.29	**	3.21		3.18	*	3.14		3.13		3.15		3.20	*	3.11		3.18		3.23	
STANDARD DEVIATIONS	.44		.45		.50		.47		.51		.46		.50		.47		.51		.49	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	84	56.0	89	59.3	202	50.5	227	56.8	119	59.5	129	64.5
0.1-0.5												
0.6-1.0												
1.1-1.5												
1.6-2.0			4	2.7	5	1.3	6	1.5	3	1.5	1	.5
2.1-2.5			3	2.0	4	1.0	6	1.5	1	.5	2	1.0
2.6-3.0	25	16.7	16	10.7	58	14.5	66	16.5	25	12.5	27	13.5
3.1-3.5	28	18.7	25	16.7	77	19.3	55	13.8	31	15.5	25	12.5
3.6-4.0	13	8.7	13	8.7	54	13.5	40	10.0	21	10.5	16	8.0
TOTALS	150		150		400		400		200		200	
MEANS	3.19		3.13		3.23	**	3.13		3.21		3.17	
STANDARD DEVIATIONS	.38		.53		.46		.50		.47		.44	

Table A-37 (continued)

GRADUATE GRADES EDUCATION

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	70	56.0	68	54.4	114	41.5	130	47.3	451	75.2	344	57.3	152	37.4	226	53.2	70	58.8	69	69.0
0.1-0.5																				
0.6-1.0																				
1.1-1.5																				
1.6-2.0			2	1.6	5	1.8			3	.5	9	1.5	8	2.0	7	1.6	2	1.7	2	2.0
2.1-2.5	1	.8					2	.7	4	.7	7	1.2	13	3.2	6	1.4	3	2.5	1	1.0
2.6-3.0	10	8.0	8	6.4	27	9.8	31	11.3	28	4.7	51	8.5	69	17.0	76	17.9	11	9.2	12	12.0
3.1-3.5	23	18.4	17	13.6	67	24.4	65	23.6	49	8.2	99	16.5	92	22.7	76	17.9	21	17.6	8	8.0
3.6-4.0	21	16.8	30	24.0	62	22.5	47	17.1	65	10.8	90	15.0	72	17.7	34	8.0	12	10.1	8	8.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	3.38		3.44		3.36		3.33		3.37		3.30		3.21	*	3.11		3.19		3.11	
STANDARD DEVIATIONS	.39		.47		.45		.39		.47		.49		.50		.46		.50		.54	

TABLE A-38

GRADUATE GRADES ENGINEERING

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	800	100	799	99.9	2999	100	2997	99.9	800	100	800	100	525	100	525	100	125	100	125	100
0.1-0.5																				
0.6-1.0																				
1.1-1.5			1	.1																
1.6-2.0							1													
2.1-2.5																				
2.6-3.0																				
3.1-3.5					1		1													
3.6-4.0							1													
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS			1.30		3.30		2.97													
STANDARD DEVIATIONS							.85													

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	150	100	150	100	400	100	400	100	199	99.5	198	99.0
0.1-0.5												
0.6-1.0												
1.1-1.5												
1.6-2.0											1	.5
2.1-2.5												
2.6-3.0												
3.1-3.5									1	.5		
3.6-4.0											1	.5
TOTALS	150		150		400		400		200		200	
MEANS									3.30		2.80	
STANDARD DEVIATIONS											1.00	

Table A-38 (continued)

GRADUATE GRADES ENGINEERING

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	95	76.0	116	92.8	260	94.5	267	97.1	547	91.2	571	95.2	406	100	425	100	119	100	100	100
0.1-0.5																				
0.6-1.0											1	.2								
1.1-1.5																				
1.6-2.0									1	.2	1	.2								
2.1-2.5	2	1.6							1	.2										
2.6-3.0	4	3.2	3	2.4	4	1.5	3	1.1	4	.7	6	1.0								
3.1-3.5	6	4.8	2	1.6	4	1.5	1	.4	18	3.0	10	1.7								
3.6-4.0	18	14.4	4	3.2	7	2.5	4	1.5	29	4.8	11	1.8								
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	3.47		3.36		3.40		3.36		3.49		3.25									
STANDARD DEVIATIONS	.47		.43		.41		.46		.42		.66									

TABLE A-39

GRADUATE GRADES MATHEMATICS

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	636	79.5	664	83.0	2107	70.2	2345	78.2	682	85.3	674	84.3	366	69.7	396	75.4	83	66.4	94	75.2
0.1-0.5 GRADE-PT.AVERAGE																				
0.6-1.0	1	.1			3	.1	4	.1					1	.2	1	.2				
1.1-1.5					3	.1	6	.2							2	.4	1	.8		
1.6-2.0	13	1.6	15	1.9	67	2.2	76	2.5	15	1.9	10	1.3	10	1.9	20	3.8	4	3.2	3	2.4
2.1-2.5	7	.9	6	.8	37	1.2	57	1.9	10	1.3	15	1.9	4	.8	12	2.3	1	.8		
2.6-3.0	55	6.9	68	8.5	299	10.0	256	8.5	47	5.9	65	8.1	60	11.4	44	8.4	15	12.0	15	12.0
3.1-3.5	16	2.0	12	1.5	209	7.0	107	3.6	13	1.6	15	1.9	28	5.3	20	3.8	10	8.0	6	4.8
3.6-4.0	72	9.0	35	4.4	275	9.2	149	5.0	33	4.1	21	2.6	56	10.7	30	5.7	11	8.8	7	5.6
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	3.18	**	2.97		3.12	**	2.92		2.97		2.85		3.15	**	2.87		3.04		3.03	
STANDARD DEVIATIONS	.66		.61		.61		.66		.65		.60		.60		.71		.64		.56	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	110	73.3	126	84.0	232	58.0	312	78.0	90	45.0	132	66.0
0.1-0.5 GRADE-PT.AVERAGE												
0.6-1.0					1	.3						
1.1-1.5			1	.7			1	.3	1	.5		
1.6-2.0	4	2.7	7	4.7	13	3.3	8	2.0	6	3.0	3	1.5
2.1-2.5	2	1.3			2	.5	11	2.8	7	3.5	5	2.5
2.6-3.0	17	11.3	10	6.7	51	12.8	27	6.8	22	11.0	26	13.0
3.1-3.5	8	5.3	2	1.3	49	12.3	13	3.3	37	18.5	15	7.5
3.6-4.0	9	6.0	4	2.7	52	13.0	28	7.0	37	18.5	19	9.5
TOTALS	150		150		400		400		200		200	
MEANS	3.00	*	2.65		3.16		3.00		3.20		3.09	
STANDARD DEVIATICNS	.59		.74		.59		.71		.59		.56	

Table A-39 (continued)

GRADUATE GRADES MATHEMATICS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	69	55.2	87	69.6	129	46.9	113	41.1	255	42.5	309	51.5	277	68.2	316	74.4	90	75.6	80	80.0
0.1-0.5 GRADE-PT.AVERAGE																				
0.6-1.0					1	.4			2	.3			1	.2	1	.2				
1.1-1.5							1	.4	3	.5	2	.3			2	.5				
1.6-2.0			1	.8	2	.7	5	1.8	14	2.3	11	1.8	9	2.2	18	4.2			2	2.0
2.1-2.5	1	.8	2	1.6	9	3.3	10	3.6	11	1.8	17	2.8	3	.7	10	2.4	1	.8	2	2.0
2.6-3.0	21	16.8	10	8.0	41	14.9	42	15.3	75	12.5	68	11.3	49	12.1	37	8.7	11	9.2	7	7.0
3.1-3.5	10	8.0	9	7.2	41	14.9	48	17.5	91	15.2	100	16.7	23	5.7	15	3.5	5	4.2	5	5.0
3.6-4.0	24	19.2	16	12.8	52	18.9	56	20.4	149	24.8	93	15.5	44	10.8	26	6.1	12	10.1	4	4.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	3.23		3.29		3.24		3.22		3.28		3.21		3.13	**	2.85		3.23		2.98	
STANDARD DEVIATIONS	.56		.53		.53		.54		.59		.55		.61		.73		.54		.59	

TABLE A-40

GRADUATE GRADES PHYSICS

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY COMBINED ACCEPTED		SECONDARY COMBINED REJECTED		SECONDARY UNITARY L ACCEPTED		SECONDARY UNITARY L REJECTED		SECONDARY UNITARY M ACCEPTED		SECONDARY UNITARY M REJECTED		SECONDARY UNITARY H ACCEPTED		SECONDARY UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	755	94.4	786	98.3	2487	82.9	2693	89.8	720	90.0	734	91.8	431	82.1	453	86.3	92	73.6	113	90.4
0.1-0.5 GRADE-PT.AVERAGE	1	.1																		
0.6-1.0					2	.1	4	.1											1	.8
1.1-1.5					1		1										1	.8		
1.6-2.0	5	.6	3	.4	55	1.8	40	1.3	14	1.8	12	1.5	8	1.5	6	1.1	5	4.0		
2.1-2.5	2	.3			27	.9	21	.7	4	.5	2	.3	7	1.3	6	1.1	2	1.6	2	1.6
2.6-3.0	13	1.6	6	.8	204	6.8	126	4.2	38	4.8	37	4.6	37	7.0	22	4.2	13	10.4	4	3.2
3.1-3.5	3	.4	1	.1	74	2.5	38	1.3	6	.8	4	.5	17	3.2	17	3.2	4	3.2		
3.6-4.0	21	2.6	4	.5	150	5.0	77	2.6	18	2.3	11	1.4	25	4.8	21	4.0	8	6.4	5	4.0
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	3.11	*	2.56		3.02	*	2.90		2.86		2.80		3.03		3.08		2.88		2.97	
STANDARD DEVIATIONS	.80		.98		.64		.70		.65		.60		.60		.61		.70		.87	

	SECONDARY SEQUEN. L ACCEPTED		SECONDARY SEQUEN. L REJECTED		SECONDARY SEQUEN. M ACCEPTED		SECONDARY SEQUEN. M REJECTED		SECONDARY SEQUEN. H ACCEPTED		SECONDARY SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	116	77.3	130	86.7	307	76.8	359	89.8	157	78.5	184	92.0
0.1-0.5 GRADE-PT.AVERAGE												
0.6-1.0			2	1.3								
1.1-1.5												
1.6-2.0	2	1.3	4	2.7	9	2.3	6	1.5	1	.5		
2.1-2.5			2	1.3	4	1.0	2	.5	2	1.0	2	1.0
2.6-3.0	17	11.3	6	4.0	40	10.0	19	4.8	12	6.0	8	4.0
3.1-3.5	1	.7	2	1.3	14	3.5	5	1.3	9	4.5	2	1.0
3.6-4.0	14	9.3	4	2.7	26	6.5	9	2.3	19	9.5	4	2.0
TOTALS	150		150		400		400		200		200	
MEANS	3.17	*	2.60		3.04		2.86		3.30	*	2.91	
STANDARD DEVIATIONS	.58		.90		.60		.70		.52		.63	

Table A-40 (continued)

GRADUATE GRADES PHYSICS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CREDITS OR ZERO	90	72.0	110	88.0	201	73.1	190	69.1	413	68.8	437	72.8	325	80.0	360	[illegible].7	106	89.1	93	93.0
0.1-0.5 GRADE-PT.AVERAGE																				
0.6-1.0									1	.2										
1.1-1.5							1	.4	1	.2										
1.6-2.0	2	1.6	2	1.6	6	2.2	5	1.8	12	2.0	12	2.0	5	1.2	5	1.2	3	2.5	1	1.0
2.1-2.5			2	1.6	9	3.3	6	2.2	10	1.7	9	1.5	6	1.5	5	1.2	1	.8	1	1.0
2.6-3.0	10	8.0	8	6.4	15	5.5	32	11.6	44	7.3	53	8.8	33	8.1	22	5.2	4	3.4		
3.1-3.5	10	8.0	1	.8	15	5.5	18	6.5	62	10.3	36	6.0	14	3.4	14	3.3	3	2.5	3	3.0
3.6-4.0	13	10.4	2	1.6	29	10.5	23	8.4	57	9.5	53	8.8	23	5.7	19	4.5	2	1.7	2	2.0
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	3.20	*	2.77		3.10		3.06		3.16		3.13		3.07		3.08		2.80		3.09	
STANDARD DEVIATIONS	.62		.56		.71		.59		.60		.60		.57		.60		.67		.70	

TABLE A-41

PRESENT STATE OF KNOWLEDGE BIOLOGY

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	239	29.9	244	30.5	1269	42.3	1260	42.0	308	38.5	290	36.3	225	42.9	215	41.0	44	35.2	48	38.4
KNOWL MORE THAN RECORDED	123	15.4	130	16.3	304	10.1	344	11.5	103	12.9	110	13.8	51	9.7	64	12.2	16	12.8	17	13.6
RECORD GOOD EST. OF KNOWL	282	35.3	263	32.9	970	32.3	979	32.6	277	34.6	271	33.9	154	29.3	162	30.9	51	40.8	46	36.8
RECORD OVEREST. OF KNOWL.	156	19.5	163	20.4	457	15.2	417	13.9	112	14.0	129	16.1	95	18.1	84	16.0	14	11.2	14	11.2
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	50	33.3	46	30.7	198	49.5	184	46.0	102	51.0	106	53.0
KNOWL MORE THAN RECORDED	12	8.0 *	24	16.0	38	9.5	36	9.0	7	3.5	17	8.5
RECORD GOOD EST. OF KNOWL	57	38.0	51	34.0	105	26.3	148	37.0	56	28.0	53	26.5
RECORD OVEREST. OF KNOWL.	31	20.7	29	19.3	59	14.8	32	8.0	35	17.5	24	12.0
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	110	88.0	82	65.6	214	77.8	225	81.8	384	64.0	366	61.0	180	44.3	180	42.4	45	37.8	35	35.0
KNOWL MORE THAN RECORDED			15	12.0	5	1.8	8	2.9	67	11.2	62	10.3	37	9.1	50	11.8	14	11.8	14	14.0
RECORD GOOD EST. OF KNOWL	10	8.0	15	12.0	36	13.1	21	7.6	103	17.2	115	19.2	109	26.8	126	29.6	45	37.8	36	36.0
RECORD OVEREST. OF KNOWL.	5	4.0	13	10.4	20	7.3	21	7.6	46	7.7	57	9.5	80	19.7	69	16.2	15	12.6	15	15.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-42

PRESENT STATE OF KNOWLEDGE CHEMISTRY

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY COMBINED ACCEPTED		SECONDARY COMBINED REJECTED		SECONDARY UNITARY L ACCEPTED		SECONDARY UNITARY L REJECTED		SECONDARY UNITARY M ACCEPTED		SECONDARY UNITARY M REJECTED		SECONDARY UNITARY H ACCEPTED		SECONDARY UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	342	42.8	342	42.8	1167	38.9	1274	42.5	339	42.4	350	43.8	191	36.4	220	41.9	45	36.0	51	40.8
KNOWL MORE THAN RECORDED	106	13.3	98	12.3	241	8.0	269	9.0	74	9.3	89	11.1	31	5.9	42	8.0	9	7.2	12	9.6
RECORD GOOD EST. OF KNOWL	214	26.8	225	28.1	921	30.7	883	29.4	211	26.4	208	26.0	178	33.9	163	31.0	37	29.6	39	31.2
RECORD OVEREST. OF KNOWL	138	17.3	135	16.9	671	22.4	574	19.1	176	22.0	153	19.1	125	23.8	100	19.0	34	27.2 **	23	18.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L ACCEPTED		SECONDARY SEQUEN. L REJECTED		SECONDARY SEQUEN. M ACCEPTED		SECONDARY SEQUEN. M REJECTED		SECONDARY SEQUEN. H ACCEPTED		SECONDARY SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	57	38.0	48	32.0	144	36.0	146	36.5	91	45.5	98	49.0
KNOWL MORE THAN RECORDED	11	7.3	12	8.0	37	9.3	32	8.0	12	6.0	16	8.0
RECORD GOOD EST. OF KNOWL	47	31.3	58	38.7	133	33.3	138	34.5	53	26.5	50	25.0
RECORD OVEREST. OF KNOWL	35	23.3	32	21.3	86	21.5	84	21.0	44	22.0	36	18.0
TOTALS	150		150		400		400		200		200	

	COLLEGE L ACCEPTED		COLLEGE L REJECTED		COLLEGE M ACCEPTED		COLLEGE M REJECTED		COLLEGE H ACCEPTED		COLLEGE H REJECTED		MALE ACCEPTED		MALE REJECTED		FEMALE ACCEPTED		FEMALE REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	69	55.2	75	60.0	149	54.2	169	61.5	252	42.0	273	45.5	141	34.7	181	42.6	50	42.0	39	39.0
KNOWL MORE THAN RECORDED	2	1.6	5	4.0	12	4.4	20	7.3	59	9.8	59	9.8	26	6.4	36	8.5	5	4.2	6	6.0
RECORD GOOD EST. OF KNOWL	21	16.8	17	13.6	66	24.0 *	40	14.5	171	28.5	149	24.8	135	33.3	130	30.6	43	36.1	33	33.0
RECORD OVEREST. OF KNOWL	33	26.4	28	22.4	48	17.5	46	16.7	118	19.7	119	19.8	104	25.6	78	18.4	21	17.6	22	22.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-43

PRESENT STATE OF KNOWLEDGE EARTH SCIENCE

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	357	44.6	352	44.0	2117	70.6	2022	67.4	530	66.3	509	63.6	372	70.9	355	67.6	100	80.0	94	75.2
KNOWL MORE THAN RECORDED	135	16.9	137	17.1	216	7.2	232	7.7	83	10.4	71	8.9	40	7.6	39	7.4	6	4.8	10	8.0
RECORD GOOD EST. OF KNOWL	234	29.3	221	27.6	474	15.8	569	19.0	140	17.5	160	20.0	75	14.3	101	19.2	14	11.2	18	14.4
RECORD OVEREST. OF KNOWL	74	9.3	90	11.3	193	6.4	177	5.9	47	5.9	60	7.5	38	7.2	30	5.7	5	4.0	3	2.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	100	66.7	88	58.7	287	71.8	282	70.5	154	77.0	162	81.0
KNOWL MORE THAN RECORDED	7	4.7	14	9.3	25	6.3	19	4.8	8	4.0	11	5.5
RECORD GOOD EST. OF KNOWL	33	22.0	35	23.3	61	15.3	83	20.8	22	11.0	15	7.5
RECORD OVEREST. OF KNOWL	10	6.7	13	8.7	27	6.8	16	4.0	16	8.0	12	6.0
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	112	89.6	97	77.6	223	81.1	251	91.3	498	83.0	457	76.2	283	69.7	282	66.4	89	74.8	73	73.0
KNOWL MORE THAN RECORDED	2	1.6	9	7.2	9	3.3	7	2.5	17	2.8	37	6.2	34	8.4	34	8.0	6	5.0	5	5.0
RECORD GOOD EST. OF KNOWL	7	5.6	12	9.6	29	10.5	11	4.0	56	9.3	77	12.8	56	13.8	83	19.5	19	16.0	18	18.0
RECORD OVEREST. OF KNOWL	4	3.2	7	5.6	14	5.1	6	2.2	29	4.8	29	4.8	33	8.1	26	6.1	5	4.2	4	4.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-44

PRESENT STATE OF KNOWLEDGE EDUCATION

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	364	45.5	371	46.4	2043	68.1	1953	65.1	546	68.3	511	63.9	346	65.9	362	69.0	86	68.8	80	64.0
KNOWL MORE THAN RECORDED	152	19.0	131	16.4	197	6.6	288	9.6	63	7.9	85	10.6	32	6.1	46	8.8	8	6.4	8	6.4
RECORD GOOD EST. OF KNOWL	275	34.4	285	35.6	700	23.3	705	23.5	179	22.4	185	23.1	142	27.0	109	20.8	30	24.0	35	28.0
RECORD OVEREST. OF KNOWL	9	1.1	13	1.6	60	2.0	54	1.8	12	1.5	19	2.4	5	1.0	8	1.5	1	.8	2	1.6
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	100	66.7	92	61.3	286	71.5	262	65.5	135	67.5	124	62.0
KNOWL MORE THAN RECORDED	5	3.3	18	12.0	23	5.8	29	7.3	7	3.5	25	12.5
RECORD GOOD EST. OF KNOWL	41	27.3	39	26.0	81	20.3	100	25.0	50	25.0	49	24.5
RECORD OVEREST. OF KNOWL	4	2.7	1	.7	10	2.5	9	2.3	8	4.0	2	1.0
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	95	76.0	81	64.8	189	68.7	195	70.9	476	79.3	435	72.5	272	67.0	294	69.2	74	62.2	68	68.0
KNOWL MORE THAN RECORDED	5	4.0	14	11.2	15	5.5	17	6.2	19	3.2	30	5.0	27	6.7	40	9.4	5	4.2	6	6.0
RECORD GOOD EST. OF KNOWL	20	16.0	26	20.8	61	22.2	51	18.5	79	13.2	110	18.3	103	25.4	85	20.0	39	32.8	24	24.0
RECORD OVEREST. OF KNOWL	5	4.0	4	3.2	10	3.6	12	4.4	26	4.3	25	4.2	4	1.0	6	1.4	1	.8	2	2.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-45

PRESENT STATE OF KNOWLEDGE MATHEMATICS

	ELEMENTARY				SECONDARY	COMBINED			SECONDARY	UNITARY L			SECONDARY	UNITARY M			SECONDARY	UNITARY H		
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	256	32.0	277	34.6	1036	34.5	947	31.6	338	42.3	295	36.9	170	32.4	157	29.9	48	38.4	47	37.6
KNOWL MORE THAN RECORDED	164	20.5	162	20.3	295	9.8	346	11.5	103	12.9	99	12.4	53	10.1	64	12.2	8	6.4	8	6.4
RECORD GOOD EST. OF KNOWL	254	31.8	227	28.4	1054	35.1	1099	36.6	200	25.0	247	30.9	186	35.4	178	33.9	38	30.4	50	40.0
RECORD OVEREST. OF KNOWL	126	15.8	134	16.8	615	20.5	608	20.3	159	19.9	159	19.9	116	22.1	126	24.0	31	24.8	20	16.0
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY	SEQUEN. L			SECONDARY	SEQUEN. M			SECONDARY	SEQUEN. H		
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	58	38.7	50	33.3	121	30.3	114	28.5	51	25.5	41	20.5
KNOWL MORE THAN RECORDED	11	7.3	20	13.3	36	9.0	43	10.8	10	5.0	27	13.5
RECORD GOOD EST. OF KNOWL	53	35.3	50	33.3	166	41.5	167	41.8	107	53.5	97	48.5
RECORD OVEREST. OF KNOWL	28	18.7	30	20.0	77	19.3	76	19.0	32	16.0	35	17.5
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	39	31.2	58	46.4	64	23.3	67	24.4	206	34.3	190	31.7	137	33.7	124	29.2	33	27.7	33	33.0
KNOWL MORE THAN RECORDED	22	17.6	10	8.0	32	11.6	34	12.4	66	11.0	94	15.7	39	9.6	54	12.7	14	11.8	10	10.0
RECORD GOOD EST. OF KNOWL	51	40.8	43	34.4	112	40.7	123	44.7	238	39.7	256	42.7	141	34.7	145	34.1	45	37.8	33	33.0
RECORD OVEREST. OF KNOWL	13	10.4	14	11.2	67	24.4	51	18.5	90	15.0	60	10.0	89	21.9	102	24.0	27	22.7	24	24.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-46

PRESENT STATE OF KNOWLEDGE PHYSICS

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	377	47.1	362	45.3	1405	46.8	1448	48.3	396	49.5	388	48.5	247	47.0	242	46.1	67	53.6	57	45.6
KNOWL MORE THAN RECORDED	108	13.5	104	13.0	232	7.7	230	7.7	94	11.8	63	7.9	33	6.3	44	8.4	5	4.0	14	11.2
RECORD GOOD EST. OF KNOWL	218	27.3	217	27.1	815	27.2	810	27.0	176	22.0	200	25.0	149	28.4	149	28.4	32	25.6	31	24.8
RECORD OVEREST. OF KNOWL	97	12.1	117	14.6	548	18.3	512	17.1	134	16.8	149	18.6	96	18.3	90	17.1	21	16.8	23	18.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	72	48.0	57	38.0	183	45.8	192	48.0	91	45.5	110	55.0
KNOWL MORE THAN RECORDED	6	4.0	19	12.7	22	5.5	26	6.5	10	5.0	10	5.0
RECORD GOOD EST. OF KNOWL	46	30.7	46	30.7	117	29.3	115	28.8	59	29.5	51	25.5
RECORD OVEREST. OF KNOWL	26	17.3	28	18.7	78	19.5	67	16.8	40	20.0	29	14.5
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	39	31.2	65	52.0	129	46.9	133	48.4	247	41.2	271	45.2	174	42.9	193	45.4	73	61.3	49	49.0
KNOWL MORE THAN RECORDED	24	19.2	19	15.2	33	12.0	33	12.0	71	11.8	81	13.5	27	6.7	36	8.5	6	5.0	8	8.0
RECORD GOOD EST. OF KNOWL	50	40.0	24	19.2	76	27.6	60	21.8	195	32.5**	174	29.0	123	30.3	125	29.4	26	21.8	24	24.0
RECORD OVEREST. OF KNOWL	12	9.6	17	13.6	37	13.5	49	17.8	87	14.5	74	12.3	82	20.2	71	16.7	14	11.8	19	19.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-47

MAJOR FOR BACHELORS DEGREE

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY COMBINED ACCEPTED		SECONDARY COMBINED REJECTED		SECONDARY UNITARY L ACCEPTED		SECONDARY UNITARY L REJECTED		SECONDARY UNITARY M ACCEPTED		SECONDARY UNITARY M REJECTED		SECONDARY UNITARY H ACCEPTED		SECONDARY UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE OR UNSPEC MAJOR	19	2.4	36	4.5	29	1.0	38	1.3	19	2.4	11	1.4	3	.6	7	1.3				
EDUCATION	432	54.0	436	54.5	452	15.1	509	17.0	173	21.6	176	22.0	52	9.9**	87	16.6	9	7.2	12	9.6
EDUCATION & SCI. OR MATH	35	4.4	32	4.0	641	21.4	592	19.7	145	18.1	140	17.5	135	25.7*	108	20.6	24	19.2	35	28.0
EDUC, SCI OR MATH, & NON-SCI	4	.5	2	.3	10	.3	11	.4	5	.6	1	.1	4	.8	3	.6			2	1.6
EDUC AND NON-SCI, NON-MATH	98	12.3	114	14.3	85	2.8	**143	4.8	37	4.6*	85	10.6	15	2.9	18	3.4	2	1.6	1	.8
SCIENCE OR MATH	61	7.6	42	5.3	1408	46.9	1268	42.3	302	37.8**	242	30.3	268	51.0	239	45.5	83	66.4**	62	49.6
SCIENCE AND MATH	1	.1			41	1.4	44	1.5	5	.6	9	1.1	6	1.1	9	1.7	2	1.6	4	3.2
SCI OR MATH & NON-SCI, NON-ED	1	.1	2	.3	29	1.0	60	2.0	7	.9	6	.8	6	1.1	8	1.5	1	.8	3	2.4
NON-SCIENCE ONLY	149	18.6	136	17.0	305	10.2	335	11.2	107	13.4	130	16.3	36	6.9	46	8.8	4	3.2	6	4.8
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L ACCEPTED		SECONDARY SEQUEN. L REJECTED		SECONDARY SEQUEN. M ACCEPTED		SECONDARY SEQUEN. M REJECTED		SECONDARY SEQUEN. H ACCEPTED		SECONDARY SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE OR UNSPEC MAJOR			2	1.3	2	.5	2	.5			3	1.5
EDUCATION	43	28.7	28	18.7	44	11.0	63	15.8	17	8.5	19	9.5
EDUCATION & SCI. OR MATH	31	20.7	6	4.0	85	21.3	83	20.8	46	23.0	60	30.0
EDUC, SCI OR MATH, & NON-SCI					1	.3						
EDUC AND NON-SCI, NON-MATH	12	8.0	1	.7	10	2.5	16	4.0			1	.5
SCIENCE OR MATH	41	27.3	85	56.7	205	51.3	181	45.3	123	61.5	104	52.0
SCIENCE AND MATH					14	3.5	7	1.8	5	2.5		
SCI OR MATH & NON-SCI, NON-ED.	2	1.3	3	2.0	3	.8	1	.3			1	.5
NON-SCIENCE ONLY	21	14.0	25	16.7	36	9.0	47	11.8	9	4.5	12	6.0
TOTALS	150		150		400		400		200		200	

Table A-47 (continued)

MAJOR FOR BACHELORS DEGREE

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE OR UNSPEC MAJOR	8	6.4	3	2.4	13	4.7	9	3.3	16	2.7	16	2.7	3	.7	6	1.4			1	1.0
EDUCATION	8	6.4	4	3.2	7	2.5	9	3.3	8	1.3	26	4.3	38	9.4	71	16.7	14	11.8	16	16.0
EDUCATION & SCI. OR MATH	4	3.2	5	4.0	32	11.6	31	11.3	24	4.0 **	49	8.2	117	28.8	93	21.9	18	15.1	15	15.0
EDUC, SCI OR MATH, & NON-SCI							1	.4			3	.5	3	.7	3	.7	1	.8		
EDUC AND NON-SCI, NON-MATH	2	1.6	6	4.8	19	6.9	17	6.2	2	.3	16	2.7	7	1.7	16	3.8	8	6.7	2	2.0
SCIENCE OR MATH	68	54.4**	51	40.8	154	56.0	148	53.8	471	78.5**	418	69.7	201	49.5	187	44.0	67	56.3	52	52.0
SCIENCE AND MATH					11	4.0	11	4.0	11	1.8	12	2.0	6	1.5	7	1.6			2	2.0
SCI OR MATH & NON-SCI, NON-ED.	6	4.8			5	1.8	3	1.1	3	.5	2	.3	5	1.2	7	1.6	1	.8	1	1.0
NON-SCIENCE ONLY	29	23.2**	56	44.8	34	12.4	46	16.7	65	10.8	58	9.7	26	6.4	35	8.2	10	8.4	11	11.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-48

MAJOR FOR MASTERS DEGREE

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE OR UNSPEC MAJOR	387	48.4**	476	59.5	2091	69.7	2179	72.6	556	69.5	575	71.9	324	61.7	* 362	69.0	64	51.2	77	61.6
EDUCATION	374	46.8	304	38.0	545	18.2	486	16.2	163	20.4	149	18.6	108	20.6	79	15.0	26	20.8	24	19.2
EDUCATION & SCI OR MATH	11	1.4	1	.1	117	3.9	114	3.8	28	3.5	22	2.8	34	6.5	26	5.0	12	9.6	12	9.6
EDUC, SCI OR MATH, & NON-SCI							1								1	.2				
EDUC AND NON-SCI, NON-MATH	9	1.1	7	.9	12	.4	16	.5	4	.5	10	1.3	6	1.1	3	.6			1	.8
SCIENCE OR MATH	7	.9	4	.5	186	6.2	158	5.3	35	4.4	25	3.1	47	9.0	50	9.5	23	18.4	10	8.0
SCIENCE AND MATH					3	.1	3	.1	1	.1										
SCI OR MATH & NON-SCI, NON-ED.					1		1		1	.1	1	.1								
NON-SCIENCE ONLY	12	1.5	8	1.0	45	1.5	42	1.4	12	1.5	18	2.3	6	1.1	4	.8			1	.8
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE OR UNSPEC MAJOR	116	77.3	113	75.3	305	76.3	312	78.0	165	82.5	161	80.5
EDUCATION	26	17.3	24	16.0	61	15.3	52	13.0	22	11.0	16	8.0
EDUCATION & SCI OR MATH	2	1.3	1	.7	10	2.5	15	3.8	3	1.5	4	2.0
EDUC, SCI OR MATH, & NON-SCI												
EDUC AND NON-SCI, NON-MATH	1	.7	1	.7	1	.3	1	.3				
SCIENCE OR MATH	3	2.0	8	5.3	14	3.5	11	2.8	6	3.0	17	8.5
SCIENCE AND MATH					2	.5					1	.5
SCI OR MATH & NON-SCI, NON-ED.												
NON-SCIENCE ONLY	2	1.3	3	2.0	7	1.8	9	2.3	4	2.0	1	.5
TOTALS	150		150		400		400		200		200	

Table A-48 (continued)

MAJOR FOR MASTERS DEGREE

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE OR UNSPEC MAJOR	27	21.6	19	15.2	60	21.8	46	16.7	31	13.5	100	16.7	242	59.6*	288	67.8	82	68.9	74	74.0
EDUCATION	24	19.2	15	12.0	50	18.2	38	13.8	23	3.8**	91	15.2	95	23.4	72	16.9	13	10.9	7	7.0
EDUCATION & SCI OR MATH	5	4.0	4	3.2	20	7.3	23	8.4	17	2.8	34	5.7	32	7.9	24	5.6	2	1.7	2	2.0
EDUC,SCI OR MATH, & NON-SCI											1	.2			1	.2				
EDUC AND NON-SCI,NON-MATH	1	.8	6	4.8	10	3.6	23	8.4	9	1.5	5	.8	3	.7	2	.5	3	2.5	1	1.0
SCIENCE OR MATH	46	36.8	45	36.0	108	39.3	121	44.0	422	70.3**	323	53.8	30	7.4	35	8.2	17	14.3	15	15.0
SCIENCE AND MATH							1	.4	1	.2	5	.8								
SCI OR MATH & NON-SCI,NON-ED .					1	.4			2	.3	2	.3								
NON-SCIENCE ONLY	22	17.6	36	28.8	26	9.5	23	8.4	45	7.5	39	6.5	4	1.0	3	.7	2	1.7	1	1.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-49

MAJOR FOR DOCTORS DEGREE

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE OR UNSPEC MAJOR	796	99.5	796	99.5	2998	99.9	2993	99.8	800	100	799	99.9	524	99.8	524	99.8	125	100	124	99.2
EDUCATION	3	.4	4	.5	1		3	.1			1	.1	1	.2	1	.2				
EDUCATION & SCI OR MATH							3	.1											1	.8
EDUC, SCI OR MATH, & NON-SCI																				
EDUC AND NON-SCI, NON-MATH																				
SCIENCE OR MATH					1		1													
SCIENCE AND MATH																				
SCI OR MATH & NON-SCI, NON-ED.																				
NON-SCIENCE ONLY	1	.1																		
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE OR UNSPEC MAJOR	150	100	150	100	400	100	399	99.8	200	100	199	99.5
EDUCATION												
EDUCATION & SCI OR MATH							1	.3				
EDUC, SCI OR MATH, & NON-SCI												
EDUC AND NON-SCI, NON-MATH												
SCIENCE OR MATH											1	.5
SCIENCE AND MATH												
SCI OR MATH & NON-SCI, NON-ED.												
NON-SCIENCE ONLY												
TOTALS	150		150		400		400		200		200	

Table A-49 (continued)

MAJOR FOR DOCTORS DEGREE

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE OR UNSPEC MAJOR	106	84.8	97	77.6	247	89.8	249	90.5	392	65.3**	497	82.8	405	99.8	424	99.8	119	100	100	100
EDUCATION	3	2.4	3	2.4	3	1.1	1	.4	7	1.2	8	1.3	1	.2	1	.2				
EDUCATION & SCI OR MATH			1	.8	3	1.1	2	.7	6	1.0	7	1.2								
EDUC,SCI OR MATH,& NON-SCI																				
EDUC AND NON-SCI,NON-MATH			2	1.6					2	.3	1	.2								
SCIENCE OR MATH	9	7.2	13	10.4	18	6.5	20	7.3	169	28.2	79	13.2								
SCIENCE AND MATH																				
SCI OR MATH & NON-SCI,NON-ED.					3	1.1			2	.3										
NON-SCIENCE ONLY	7	5.6	9	7.2	1	.4	3	1.1	22	3.7	8	1.3								
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-50

HIGHEST DEGREE EARNED

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE	17	2.1	31	3.9	23	.8	27	.9	16	2.0	4	.5			6	1.1				
BACHELORS	360	45.0	438	54.8	2036	67.9	2124	70.8	532	66.5	563	70.4	313	59.6	350	66.7	64	51.2	78	62.4
MASTERS	407	50.9	317	39.6	888	29.6*	797	26.6	243	30.4	220	27.5	197	37.5	157	29.9	59	47.2	43	34.4
DOCTORS	4	.5	5	.6	2	.1	9	.3			2	.3	1	.2	1	.2			1	.8
MORE THAN ONE BACHELORS	11	1.4	9	1.1	38	1.3	26	.9	7	.9	9	1.1	9	1.7	6	1.1	1	.8		
MORE THAN ONE MASTERS	1	.1			13	.4	17	.6	2	.3	2	.3	5	1.0	5	1.0	1	.8	3	2.4
MORE THAN ONE DOCTORS																				
TOTALS	800		800		3000		3000		800		800		525		526		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE			2	1.3	2	.5	2	.5			1	.5
BACHELORS	113	75.3	110	73.3	298	74.5	307	76.8	164	82.0	156	78.0
MASTERS	34	22.7	36	24.0	91	22.8	86	21.5	34	17.0	38	19.0
DOCTORS							1	.3			1	.5
MORE THAN ONE BACHELORS	3	2.0	1	.7	6	1.5	3	.8	2	1.0	3	1.5
MORE THAN ONE MASTERS			1	.7	3	.8	1	.3			1	.5
MORE THAN ONE DOCTORS												
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO DEGREE	7	5.6			6	2.2	5	1.8	1	.2	3	.5			5	1.2			1	1.0
BACHELORS	16	12.8	16	12.8	44	16.0	34	12.4	36	6.0**	79	13.2	232	57.1	278	65.4	81	68.1	72	72.0
MASTERS	76	60.8	76	60.8	188	68.4	194	70.5	335	55.8**	385	64.2	159	39.2	131	30.8	38	31.9	26	26.0
DOCTORS	19	15.2	28	22.4	25	9.1	25	9.1	209	34.8**	101	16.8	1	.2	1	.2				
MORE THAN ONE BACHELORS	4	3.2	1	.8	1	.4	3	1.1	1	.2	1	.2	9	2.2	5	1.2			1	1.0
MORE THAN ONE MASTERS	3	2.4	4	3.2	7	2.5	14	5.1	15	2.5	30	5.0	5	1.2	5	1.2				
MORE THAN ONE DOCTORS					4	1.5			3	.5	1	.2								
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-51

RECENCY OF BACHELORS DEGREE

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO BACHELORS DEGREE	22	2.8	34	4.3	36	1.2	39	1.3	18	2.3	10	1.3	4	.8	6	1.1	1	.8		
0 TO 5 YEARS AGO	151	18.9	222	27.8	1169	39.0	1490	49.7	283	35.4	367	45.9	188	35.8	250	47.6	45	36.0	61	48.8
6 TO 10 YEARS	221	27.6	204	25.5	707	23.6	561	18.7	189	23.6	154	19.3	122	23.2	97	18.5	35	28.0	20	16.0
11 TO 15 YEARS	228	28.5	204	25.5	580	19.3	491	16.4	167	20.9	135	16.9	105	20.0	82	15.6	26	20.8	30	24.0
16 TO 20 YEARS	79	9.9	53	6.6	168	5.6	134	4.5	39	4.9	43	5.4	35	6.7	25	4.8	6	4.8	5	4.0
21 TO 25 YEARS	45	5.6	50	6.3	138	4.6	126	4.2	40	5.0	40	5.0	27	5.1	27	5.1	6	4.8	4	3.2
26 TO 30 YEARS	46	5.8	16	2.0	111	3.7	92	3.1	38	4.8	31	3.9	30	5.7	18	3.4	2	1.6	3	2.4
31 TO 35 YEARS	8	1.0	11	1.4	68	2.3	51	1.7	18	2.3	11	1.4	11	2.1	14	2.7	3	2.4	2	1.6
36 TO 40 YEARS			6	.8	23	.8	11	.4	8	1.0	5	.6	3	.6	6	1.1	1	.8		
41 OR MORE YEARS							5	.2			4	.5								
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	11.82	**	10.57		9.83	**	8.63		10.38	*	9.34		10.50	*	9.36		9.61		8.52	
STANDARD DEVIATIONS	7.13		7.30		7.99		7.68		8.26		8.20		8.22		8.47		7.50		6.98	

	SECONDARY ACCEPTED		SEQUEN. L REJECTED		SECONDARY ACCEPTED		SEQUEN. M REJECTED		SECONDARY ACCEPTED		SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO BACHELORS DEGREE			3	2.0	4	1.0	3	.8	2	1.0	3	1.5
0 TO 5 YEARS AGO	41	27.3	73	48.7	169	42.3	225	56.3	110	55.0	123	61.5
6 TO 10 YEARS	55	36.7	29	19.3	105	26.3	66	16.5	45	22.5	36	18.0
11 TO 15 YEARS	30	20.0	28	18.7	70	17.5	63	15.8	29	14.5	22	11.0
16 TO 20 YEARS	8	5.3	5	3.3	21	5.3	16	4.0	7	3.5	3	1.5
21 TO 25 YEARS	10	6.7	6	4.0	12	3.0	15	3.8	4	2.0	6	3.0
26 TO 30 YEARS	4	2.7	3	2.0	8	2.0	7	1.8	2	1.0	3	1.5
31 TO 35 YEARS	1	.7	3	2.0	10	2.5	5	1.3	1	.5	4	2.0
36 TO 40 YEARS	1	.7			1	.3						
41 OR MORE YEARS												
TOTALS	150		150		400		400		200		200	
MEANS	10.07	*	8.34		8.85	*	7.60		6.94		6.86	
STANDARD DEVIATIONS	6.98		7.11		7.25		6.74		5.63		6.65	

Table A-51 (continued)

RECENCY OF BACHELORS DEGREE

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO BACHELORS DEGREE	8	6.4	2	1.6	11	4.0	9	3.3	15	2.5	14	2.3	4	1.0	5	1.2			1	1.0
0 TO 5 YEARS AGO	20	16.0	20	16.0	42	15.3	55	20.0	90	15.0	119	19.8	142	35.0	204	48.0	46	38.7	46	46.0
6 TO 10 YEARS	23	18.4	25	20.0	70	25.5	65	23.6	158	26.3	148	24.7	103	25.4	86	20.2	19	16.0	11	11.0
11 TO 15 YEARS	31	24.8	31	24.8	72	26.2	64	23.3	149	24.8	138	23.0	89	21.9	69	16.2	16	13.4	13	13.0
16 TO 20 YEARS	16	12.8	16	12.8	30	10.9	22	8.0	66	11.0	58	9.7	23	5.7	14	3.3	12	10.1	11	11.0
21 TO 25 YEARS	18	14.4	11	8.8	18	6.5	17	6.2	59	9.8	46	7.7	18	4.4	16	3.8	9	7.6	11	11.0
26 TO 30 YEARS	6	4.8	9	7.2	13	4.7	19	6.9	31	5.2	33	5.5	20	4.9	13	3.1	10	8.4	5	5.0
31 TO 35 YEARS	3	2.4	8	6.4	14	5.1	15	5.5	19	3.2	27	4.5	6	1.5	13	3.1	5	4.2	1	1.0
36 TO 40 YEARS			2	1.6	3	1.1	9	3.3	10	1.7	17	2.8	1	.2	5	1.2	2	1.7	1	1.0
41 OR MORE YEARS			1	.8	2	.7			3	.5										
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	13.81		14.95		13.64		13.81		13.71		13.48		10.03		9.05		12.12		10.68	
STANDARD DEVIATIONS	7.87		9.47		8.83		9.71		8.64		9.27		7.58		8.33		9.90		8.91	

TABLE A-52

RECENCY OF MASTERS DEGREE

	ELEMENTARY				SECCNDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO MASTERS DEGREE	387	48.4	479	59.9	2087	69.6	2178	72.6	556	69.5	575	71.9	323	61.5	362	69.0	65	52.0	77	61.6
0 TO 5 YEARS	172	21.5	171	21.4	448	14.9	431	14.4	121	15.1	113	14.1	96	18.3	80	15.2	39	31.2	29	23.2
6 TO 10 YEARS	150	18.8	91	11.4	223	7.4	190	6.3	58	7.3	58	7.3	49	9.3	31	5.9	10	8.0	7	5.6
11 TO 15 YEARS	68	8.5	42	5.3	147	4.9	127	4.2	42	5.3	36	4.5	39	7.4	33	6.3	7	5.6	7	5.6
16 TO 20 YEARS	17	2.1	12	1.5	35	1.2	29	1.0	11	1.4	9	1.1	6	1.1	5	1.0	1	.8	1	.8
21 TO 25 YEARS	4	.5	4	.5	32	1.1	23	.8	6	.8	3	.4	7	1.3	7	1.3	2	1.6	3	2.4
26 TO 30 YEARS	1	.1	1	.1	17	.6	15	.5	5	.6	4	.5	3	.6	4	.8	1	.8	1	.8
31 TO 35 YEARS	1	.1			9	.3	3	.1	1	.1			2	.4	2	.4				
36 TO 40 YEARS					2	.1	4	.1			2	.3			1	.2				
41 OR MORE YEARS																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	7.41		6.61		7.95		7.53		7.71		7.51		7.95		8.49		6.33		7.27	
STANDARD DEVIATIONS	4.79		4.73		6.60		6.36		6.11		6.19		6.29		7.26		5.67		6.53	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO MASTERS DEGREE	116	77.3	114	76.0	306	76.5	312	78.0	161	80.5	162	81.0
0 TO 5 YEARS	16	10.7	20	13.3	44	11.0	43	10.8	22	11.0	23	11.5
6 TO 10 YEARS	8	5.3	8	5.3	26	6.5	25	6.3	12	6.0	8	4.0
11 TO 15 YEARS	6	4.0	5	3.3	14	3.5	10	2.5	2	1.0	3	1.5
16 TO 20 YEARS	3	2.0	2	1.3	4	1.0	6	1.5	1	.5	1	.5
21 TO 25 YEARS	1	.7	1	.7	4	1.0	2	.5			2	1.0
26 TO 30 YEARS					1	.3	2	.5	2	1.0		
31 TO 35 YEARS					1	.3					1	.5
36 TO 40 YEARS												
41 OR MORE YEARS												
TOTALS	150		150		400		400		200		200	
MEANS	7.85		6.89		7.95		7.60		6.72		7.08	
STANDARD DEVIATIONS	5.62		5.28		6.33		5.99		6.06		6.86	

Table A-52 (continued)

RECENCY OF MASTERS DEGREE

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO MASTERS DEGREE	26	20.8	19	15.2	59	21.5	46	16.7	80	13.3	106	17.7	241	59.4	288	67.8	82	68.9	74	74.0
0 TO 5 YEARS	36	28.8	50	40.0	88	32.0	118	42.9	234	39.0	232	38.7	84	20.7	71	16.7	12	10.1	9	9.0
6 TO 10 YEARS	29	23.2	22	17.6	48	17.5	46	16.7	110	18.3	108	18.0	42	10.3	22	5.2	7	5.9	9	9.0
11 TO 15 YEARS	24	19.2	16	12.8	53	19.3	31	11.3	94	15.7	74	12.3	32	7.9	30	7.1	7	5.9	3	3.0
16 TO 20 YEARS	6	4.8	12	9.6	10	3.6	11	4.0	40	6.7	30	5.0	2	.5	2	.5	4	3.4	3	3.0
21 TO 25 YEARS	2	1.6	1	.8	12	4.4	13	4.7	16	2.7	21	3.5	5	1.2	5	1.2	2	1.7	2	2.0
26 TO 30 YEARS	2	1.6	3	2.4	3	1.1	8	2.9	11	1.8	12	2.0			4	.9	3	2.5		
31 TO 35 YEARS			2	1.6			2	.7	10	1.7	14	2.3			2	.5	2	1.7		
36 TO 40 YEARS					2	.7			4	.7	3	.5			1	.2				
41 OR MORE YEARS									1	.2										
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	8.71		8.71		9.04		8.35		9.09		9.02		7.00		8.36		12.19		9.15	
STANDARD DEVIATIONS	5.77		7.18		6.80		7.29		7.67		7.93		4.96		7.43		9.19		6.24	

TABLE A-53

ELEMENTARY SCHOOL TEACHING PRE 6-30-54

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	458	57.3	448	56.0	2754	91.8	2802	93.4	717	89.6	742	92.8	480	91.4	479	91.2	118	94.4	120	96.0
1 TO 5 YEARS	210	26.3	185	23.1	183	6.1	122	4.1	68	8.5	33	4.1	27	5.1	31	5.9	4	3.2	3	2.4
5PLUS TO 10 YEARS	69	8.6	89	11.1	46	1.5	54	1.8	11	1.4	14	1.8	14	2.7	15	2.9	3	2.4		
10 PLUS TO 15 YEARS	31	3.9	32	4.0	9	.3	10	.3	3	.4	5	.6	2	.4					1	.8
15 PLUS TO 20 YEARS	22	2.8	27	3.4	4	.1	10	.3			6	.8	2	.4					1	.8
20 PLUS TO 30 YEARS	10	1.3	18	2.3	4	.1	2	.1	1	.1										
MORE THAN 30 YEARS			1	.1																
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY ACCEPTED		SEQUEN. L REJECTED		SECONDARY ACCEPTED		SEQUEN. M REJECTED		SECONDARY ACCEPTED		SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	137	91.3	137	91.3	373	93.3	384	96.0	188	94.0	190	95.0
1 TO 5 YEARS	8	5.3	9	6.0	22	5.5	11	2.8	11	5.5	5	2.5
5PLUS TO 10 YEARS	5	3.3	3	2.0	4	1.0	5	1.3			5	2.5
10 PLUS TC 15 YEARS					1	.3			1	.5		
15 PLUS TC 20 YEARS			1	.7								
20 PLUS TC 30 YEARS												
MORE THAN 30 YEARS												
TOTALS	150		150		400		400		200		200	

	COLLEGE L ACCEPTED		COLLEGE L REJECTED		COLLEGE M ACCEPTED		COLLEGE M REJECTED		COLLEGE H ACCEPTED		COLLEGE H REJECTED		MALE ACCEPTED		MALE REJECTED		FEMALE ACCEPTED		FEMALE REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE.	121	96.8	114	91.2	256	93.1	264	96.0	582	97.0	566	94.3	388	95.6	402	94.6	92	77.3	77	77.0
1 TO 5 YEARS	4	3.2	7	5.6	14	5.1	8	2.9	14	2.3	22	3.7	13	3.2	17	4.0	14	11.8	14	14.0
5PLUS TO 10 YEARS					3	1.1	3	1.1	3	.5	12	2.0	5	1.2	6	1.4	9	7.6	9	9.0
10 PLUS TO 15 YEARS			2	1.6	2	.7											2	1.7		
15 PLUS TO 20 YEARS			2	1.6													2	1.7		
20 PLUS TO 30 YEARS									1	.2										
MORE THAN 30 YEARS																				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-54

ELEMENTARY SCHOOL TEACHING AFTER 6-30-54

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	51	6.4	49	6.1	2717	90.6	2766	92.2	687	85.9	715	89.4	496	94.5	491	93.5	112	89.6	122	97.6
1 TO 2 YEARS	63	7.9	77	9.6	150	5.0	130	4.3	48	6.0	53	6.6	16	3.0	19	3.6	8	6.4	1	.8
2 PLUS TO 4 YEARS	133	16.6	135	16.9	72	2.4	53	1.8	36	4.5	10	1.3	7	1.3	10	1.9	3	2.4	2	1.6
4 PLUS TO 6 YEARS	153	19.1	115	14.4	33	1.1	24	.8	18	2.3	7	.9	2	.4	1	.2				
6 PLUS TO 8 YEARS	109	13.6	115	14.4	16	.5	14	.5	8	1.0	7	.9	1	.2	3	.6				
8 PLUS TO 10 YEARS	291	36.4	309	38.6	12	.4	13	.4	3	.4	8	1.0	3	.6	1	.2	2	1.6		
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY ACCEPTED		SEQUEN. L REJECTED		SECONDARY ACCEPTED		SEQUEN. M REJECTED		SECONDARY ACCEPTED		SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	123	82.0	134	89.3	379	94.8	378	94.5	182	91.0	191	95.5
1 TO 2 YEARS	11	7.3	9	6.0	11	2.8	9	2.3	11	5.5	3	1.5
2 PLUS TO 4 YEARS	5	3.3	2	1.3	5	1.3	6	1.5	5	2.5	4	2.0
4 PLUS TO 6 YEARS	7	4.7	3	2.0	4	1.0	5	1.3			2	1.0
6 PLUS TO 8 YEARS	2	1.3	2	1.3	1	.3			1	.5		
8 PLUS TO 10 YEARS	2	1.3					2	.5	1	.5		
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	124	99.2	121	96.8	270	98.2	268	97.5	587	97.8	580	96.7	390	96.1	403	94.8	106	89.1	88	88.0
1 TO 2 YEARS			1	.8	3	1.1	2	.7	13	2.2	14	2.3	12	3.0	14	3.3	4	3.4	5	5.0
2 PLUS TO 4 YEARS			1	.8	2	.7	3	1.1			4	.7	2	.5	4	.9	5	4.2	6	6.0
4 PLUS TO 6 YEARS	1	.8	1	.8			2	.7			2	.3			1	.2	2	1.7		
6 PLUS TO 8 YEARS			1	.8											2	.5	1	.8	1	1.0
8 PLUS TO 10 YEARS													2	.5	1	.2	1	.8		
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-55

SECONDARY SCHOOL TEACHING PRE 6-30-54

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	619	77.4	652	81.5	2227	74.2	2331	77.7	582	72.8	598	74.8	383	73.0	391	74.5	97	77.6	92	73.6
1 TO 5 YEARS	123	15.4	98	12.3	482	16.1	399	13.3	140	17.5	112	14.0	82	15.6	79	15.0	17	13.6	24	19.2
5 PLUS TO 10 YEARS	32	4.0	34	4.3	127	4.2	134	4.5	36	4.5	52	6.5	26	5.0	24	4.6	5	4.0	7	5.6
10 PLUS TO 15 YEARS	16	2.0	12	1.5	78	2.6	64	2.1	23	2.9	20	2.5	14	2.7	14	2.7	3	2.4	1	.8
15 PLUS TO 20 YEARS	8	1.0	2	.3	50	1.7	32	1.1	11	1.4	6	.8	13	2.5	6	1.1	1	.8	1	.8
20 PLUS TO 30 YEARS	1	.1	2	.3	36	1.2	38	1.3	8	1.0	11	1.4	7	1.3	11	2.1	2	1.6		
MORE THAN 30 YEARS	1	.1					2	.1			1	.1								
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	107	71.3	116	77.3	312	78.0	335	83.8	169	84.5	166	83.0
1 TO 5 YEARS	21	14.0	21	14.0	63	15.8	45	11.3	21	10.5	18	9.0
5 PLUS TO 10 YEARS	10	6.7	4	2.7	9	2.3	10	2.5	7	3.5	8	4.0
10 PLUS TC 15 YEARS	7	4.7	5	3.3	9	2.3	4	1.0	2	1.0	4	2.0
15 PLUS TC 20 YEARS	4	2.7	1	.7	5	1.3	2	.5	1	.5	1	.5
20 PLUS TC 30 YEARS	1	.7	3	2.0	2	.5	3	.8			3	1.5
MORE THAN 30 YEARS							1	.3				
TOTALS	150		150		4CC		4C0		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	102	81.6	95	76.0	195	70.9	192	69.8	499	83.2	431	71.8	305	75.1	327	76.9	78	65.5	64	64.0
1 TO 5 YEARS	15	12.0	22	17.6	48	17.5	48	17.5	72	12.0	115	19.2	66	16.3	60	14.1	16	13.4	19	19.0
5 PLUS TO 10 YEARS	8	6.4	4	3.2	15	5.5	15	5.5	20	3.3	27	4.5	19	4.7	19	4.5	7	5.9	5	5.0
10 PLUS TO 15 YEARS			2	1.6	8	2.9	10	3.6	6	1.0	12	2.0	10	2.5	7	1.6	4	3.4	7	7.0
15 PLUS TO 20 YEARS					3	1.1	7	2.5	2	.3	8	1.3	5	1.2	5	1.2	8	6.7	1	1.0
20 PLUS TO 30 YEARS			2	1.6	5	1.8	3	1.1	1	.2	6	1.0	1	.2	7	1.6	6	5.0	4	4.0
MORE THAN 30 YEARS					1	.4					1	.2								
TOTALS	125		12		275		275		600		600		406		425		119		100	

TABLE A-56

SECONDARY SCHOOL TEACHING AFTER 6-30-54

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	597	74.6	572	71.5	27	.9	21	.7	9	1.1	2	.3	3	.6	4	.8	5	4.0	2	1.6
1 TO 2 YEARS	72	9.0	97	12.1	390	13.0	860	28.7	127	15.9	208	26.0	54	10.3	136	25.9	13	10.4	37	29.6
2 PLUS TO 4 YEARS	56	7.0	45	5.6	824	27.5	777	25.9	230	28.8	203	25.4	140	26.7	143	27.2	34	27.2	31	24.8
4 PLUS TO 6 YEARS	32	4.0	34	4.3	596	19.9	422	14.1	140	17.5	118	14.8	111	21.1	79	15.0	23	18.4	13	10.4
6 PLUS TO 8 YEARS	18	2.3	19	2.4	356	11.9	258	8.6	81	10.1	61	7.6	70	13.3	47	9.0	15	12.0	9	7.2
8 PLUS TO 10 YEARS	25	3.1	33	4.1	807	26.9	662	22.1	213	26.6	208	26.0	147	28.0	116	22.1	35	28.0	33	26.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	7	4.7	1	.7			2	.5	1	.5	2	1.0
1 TO 2 YEARS	11	7.3	45	30.0	44	11.0	144	36.0	39	19.5	66	33.0
2 PLUS TO 4 YEARS	34	22.7	37	24.7	101	25.3	107	26.8	56	28.0	62	31.0
4 PLUS TO 6 YEARS	32	21.3	19	12.7	105	26.3	50	12.5	39	19.5	25	12.5
6 PLUS TO 8 YEARS	29	19.3	15	10.0	57	14.3	35	8.8	19	9.5	14	7.0
8 PLUS TO 10 YEARS	37	24.7	33	22.0	93	23.3	62	15.5	46	23.0	31	15.5
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	91	72.8	95	76.0	148	53.8	149	54.2	443	73.8	364	60.7	3	.7	4	.9				
1 TO 2 YEARS	15	12.0	17	13.6	45	16.4	28	10.2	72	12.0	84	14.0	37	9.1	110	25.9	17	14.3	26	26.0
2 PLUS TO 4 YEARS	8	6.4	3	2.4	36	13.1	46	16.7	49	8.2	71	11.8	110	27.1	116	27.3	30	25.2	27	27.0
4 PLUS TO 6 YEARS	3	2.4	5	4.0	23	8.4	28	10.2	18	3.0	52	8.7	89	21.9	69	16.2	22	18.5	10	10.0
6 PLUS TO 8 YEARS	3	2.4	3	2.4	14	5.1	14	5.1	10	1.7	20	3.3	60	14.8	39	9.2	10	8.4	8	8.0
8 PLUS TO 10 YEARS	5	4.0	2	1.6	9	3.3	10	3.6	8	1.3	9	1.5	107	26.4	87	20.5	40	33.6	29	29.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-57

COLLEGE TEACHING PRE 6-30-54

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	789	98.6	794	99.3	2925	97.5	2955	98.5	786	98.3	786	98.3	505	96.2	514	97.9	121	96.8	122	97.6
1 TO 5 YEARS	10	1.3	6	.8	64	2.1	36	1.2	13	1.6	10	1.3	18	3.4	10	1.9	4	3.2	2	1.6
5 PLUS TO 10 YEARS	1	.1			9	.3	6	.2	1	.1	3	.4	2	.4	1	.2			1	.8
10 PLUS TO 15 YEARS					2	.1	3	.1			1	.1								
15 PLUS TO 20 YEARS																				
20 PLUS TO 30 YEARS																				
MORE THAN 30 YEARS																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	148	98.7	148	98.7	393	98.3	395	98.8	198	99.0	197	98.5
1 TO 5 YEARS	2	1.3	2	1.3	6	1.5	5	1.3	2	1.0	3	1.5
5 PLUS TO 10 YEARS												
10 PLUS TC 15 YEARS					1	.3						
15 PLUS TC 20 YEARS												
20 PLUS TC 30 YEARS												
MORE THAN 30 YEARS												
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	94	75.2	91	72.8	216	78.5	218	79.3	449	74.8	468	78.0	396	97.5	416	97.9	109	91.5	98	98.0
1 TO 5 YEARS	15	12.0	19	15.2	32	11.6	26	9.5	79	13.2	67	11.2	9	2.2	9	2.1	9	7.6	1	1.0
5 PLUS TO 10 YEARS	13	10.4	9	7.2	20	7.3	17	6.2	49	8.2	39	6.5	1	.2			1	.8	1	1.0
10 PLUS TO 15 YEARS	1	.8	3	2.4	5	1.8	11	4.0	10	1.7	14	2.3								
15 PLUS TO 20 YEARS	2	1.6	1	.8	1	.4	2	.7	7	1.2	4	.7								
20 PLUS TO 30 YEARS			1	.8	1	.4	1	.4	5	.8	8	1.3								
MORE THAN 30 YEARS			1	.8					1	.2										
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-58

COLLEGE TEACHING AFTER 6-30-54

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	772	96.5	779	97.4	2813	93.8	2854	95.1	764	95.5	759	94.9	487	92.8	495	94.3	113	90.4	118	94.4
1 TO 2 YEARS	19	2.4	16	2.0	120	4.0	91	3.0	25	3.1	28	3.5	23	4.4	17	3.2	9	7.2	3	2.4
2 PLUS TO 4 YEARS	7	.9	1	.1	34	1.1	31	1.0	4	.5	9	1.1	6	1.1	5	1.0	2	1.6	2	1.6
4 PLUS TO 6 YEARS	2	.3	4	.5	17	.6	10	.3	4	.5	2	.3	5	1.0	6	1.1	1	.8		
6 PLUS TO 8 YEARS					12	.4	4	.1	3	.4	1	.1	3	.6					1	.8
8 PLUS TO 10 YEARS					4	.1	10	.3			1	.1	1	.2	2	.4			1	.8
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	144	96.0	146	97.3	365	91.3	384	96.0	187	93.5	190	95.0
1 TO 2 YEARS	4	2.7	3	2.0	19	4.8	10	2.5	9	4.5	5	2.5
2 PLUS TO 4 YEARS	1	.7	1	.7	11	2.8	3	.8	2	1.0	3	1.5
4 PLUS TO 6 YEARS					2	.5			1	.5	1	.5
6 PLUS TO 8 YEARS	1	.7			2	.5					1	.5
8 PLUS TO 10 YEARS					1	.3	3	.8	1	.5		
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	7	5.6	1	.8	13	4.7	17	6.2	3	.5	19	3.2	378	93.1	405	95.3	109	91.6	90	90.0
1 TO 2 YEARS	26	20.8	27	21.6	56	20.4	61	22.2	125	20.8	156	26.0	16	3.9	12	2.8	7	5.9	5	5.0
2 PLUS TO 4 YEARS	22	17.6	32	25.6	65	23.6	75	27.3	160	26.7	161	26.8	5	1.2	3	.7	1	.8	2	2.0
4 PLUS TO 6 YEARS	17	13.6	20	16.0	39	14.2	39	14.2	99	16.5	88	14.7	4	1.0	3	.7	1	.8	3	3.0
6 PLUS TO 8 YEARS	22	17.6	7	5.6	36	13.1	31	11.3	72	12.0	57	9.5	2	.5			1	.8		
8 PLUS TO 10 YEARS	31	24.8	38	30.4	66	24.0	52	18.9	141	23.5	119	19.8	1	.2	2	.5				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-59

TEACHING OTHER INSTITUTIONS PRE 6-30-54

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	779	97.4	785	98.1	2956	98.5	2956	98.5	789	98.6	786	98.3	512	97.5	516	98.3	125	100	122	97.6
1 TO 5 YEARS	16	2.0	10	1.3	32	1.1	36	1.2	6	.8	12	1.5	10	1.9	7	1.3			2	1.6
5 PLUS TO 10 YEARS	5	.6	2	.3	9	.3	5	.2	3	.4	1	.1	3	.6	2	.4				
10 PLUS TO 15 YEARS			2	.3	3	.1	2	.1	2	.3									1	.8
15 PLUS TO 20 YEARS			1	.1																
20 PLUS TO 30 YEARS																				
MORE THAN 30 YEARS							1				1	.1								
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	147	98.0	147	98.0	390	97.5	398	99.5	200	100	197	98.5
1 TO 5 YEARS	2	1.3	2	1.3	7	1.8	1	.3			3	1.5
5 PLUS TO 10 YEARS	1	.7			2	.5	1	.3				
10 PLUS TC 15 YEARS			1	.7	1	.3						
15 PLUS TC 20 YEARS												
20 PLUS TC 30 YEARS												
MORE THAN 30 YEARS												
TOTALS	150		150		40C		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	120	96.0	123	98.4	259	94.2	264	96.0	572	95.3	576	96.0	396	97.5	417	98.1	116	97.5	99	99.0
1 TO 5 YEARS	5	4.0	2	1.6	11	4.0	8	2.9	27	4.5	16	2.7	7	1.7	7	1.6	3	2.5		
5 PLUS TO 10 YEARS					2	.7	2	.7	1	.2	6	1.0	3	.7	1	.2			1	1.0
10 PLUS TO 15 YEARS					2	.7	1	.4			1	.2								
15 PLUS TO 20 YEARS																				
20 PLUS TO 30 YEARS					1	.4														
MORE THAN 30 YEARS											1	.2								
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-60

TEACHING OTHER INSTITUTION AFTER 6-30-54

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	700	87.5	766	95.8	2919	97.3	2925	97.5	781	97.6	777	97.1	510	97.1	511	97.3	122	97.6	120	96.0
1 TO 2 YEARS	33	4.1	14	1.8	53	1.8	39	1.3	13	1.6	12	1.5	8	1.5	8	1.5	3	2.4	3	2.4
2 PLUS TO 4 YEARS	20	2.5	8	1.0	19	.6	20	.7	5	.6	7	.9	4	.8	2	.4			2	1.6
4+ TO 6 YEARS	16	2.0	3	.4	4	.1	7	.2	1	.1	2	.3	1	.2	3	.6				
6+ TO 8 YEARS	15	1.9	3	.4	2	.1	7	.2			2	.3								
8+ TO 10 YEARS	16	2.0	6	.8	3	.1	2	.1					2	.4	1	.2				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY ACCEPTED		SEQUEN. L REJECTED		SECONDARY ACCEPTED		SEQUEN. M REJECTED		SECONDARY ACCEPTED		SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	142	94.7	147	98.0	387	96.8	392	98.0	194	97.0	194	97.0
1 TO 2 YEARS	6	4.0	1	.7	6	1.5	3	.8	5	2.5	4	2.0
2 PLUS TO 4 YEARS	2	1.3	1	.7	4	1.0	2	.5	1	.5	1	.5
4+ TO 6 YEARS					1	.3	1	.3			1	.5
6+ TO 8 YEARS			1	.7	1	.3	2	.5				
8+ TO 10 YEARS					1	.3						
TOTALS	150		150		400		400		200		200	

	COLLEGE L ACCEPTED		COLLEGE L REJECTED		COLLEGE M ACCEPTED		COLLEGE M REJECTED		COLLEGE H ACCEPTED		COLLEGE H REJECTED		MALE ACCEPTED		MALE REJECTED		FEMALE ACCEPTED		FEMALE REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	119	95.2	121	96.8	256	93.1	264	96.0	565	94.2	559	93.2	393	96.8	413	97.2	117	98.3	98	98.0
1 TO 2 YEARS	4	3.2	1	.8	14	5.1	6	2.2	23	3.8	23	3.8	8	2.0	7	1.6			1	1.0
2 PLUS TO 4 YEARS			2	1.6	1	.4	4	1.5	6	1.0	12	2.0	2	.5	1	.2	2	1.7	1	1.0
4+ TO 6 YEARS	1	.8			3	1.1	1	.4	4	.7	6	1.0	1	.2	3	.7				
6+ TO 8 YEARS			1	.8					1	.2										
8+ TO 10 YEARS	1	.8			1	.4			1	.2			2	.5	1	.2				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-61

TEACHING EXPERIENCE BIOLOGY

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	752	94.0	750	93.8	1778	59.3	1981	66.0	494	61.8	545	68.1	288	54.9	342	65.1	50	40.0	62	49.6
1 TO 5 YEARS	39	4.9	40	5.0	905	30.2	768	25.6	239	29.9	188	23.5	176	33.5	134	25.5	51	40.8	46	36.8
6 TO 10 YEARS	5	.6	4	.5	217	7.2	153	5.1	41	5.1	42	5.3	39	7.4	31	5.9	20	16.0	9	7.2
11 TO 15 YEARS	4	.5	5	.6	67	2.2	66	2.2	16	2.0	16	2.0	16	3.0	9	1.7	2	1.6	6	4.8
16 TO 20 YEARS			1	.1	18	.6	21	.7	6	.8	6	.8	1	.2	6	1.1			2	1.6
21 TO 25 YEARS					9	.3	10	.3	3	.4	2	.3	3	.6	3	.6				
26 TO 30 YEARS					3	.1	1		1	.1	1	.1	1	.2			1	.8		
31 TO 35 YEARS					2	.1											1	.8		
36 TO 40 YEARS					1								1	.2						
41 OR MORE YEARS																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	.26		.29		2.01	**	1.67		1.82		1.61		2.29	*	1.80		3.20		2.59	
STANDARD DEVIATIONS	1.27		1.46		3.54		3.28		3.38		3.31		3.94		3.53		4.62		3.80	
MEAN$_2$*	4.35		4.70		4.94		4.93		4.76		5.06		5.07		5.16		5.33		5.14	
STANDARD DEVIATION$_2$*	2.98		3.69		4.05		3.96		3.98		4.12		4.52		4.29		4.91		3.96	

***Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.**

Table A-61 (continued)

TEACHING EXPERIENCE BIOLOGY

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H				COLLEGE L				COLLEGE M			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	84	56.0	80	53.3	239	59.8	268	67.0	142	71.0	144	72.0	121	96.8	108	86.4	233	84.7	240	87.3
1 TO 5 YEARS	45	30.0	54	36.0	129	32.3	108	27.0	46	23.0	45	22.5	4	3.2	11	8.8	37	13.5	34	12.4
6 TO 10 YEARS	17	11.3	11	7.3	23	5.8	13	3.3	9	4.5	4	2.0			3	2.4	4	1.5	1	.4
11 TO 15 YEARS	2	1.3	5	3.3	7	1.8	10	2.5	2	1.0	5	2.5			1	.8	1	.4		
16 TO 20 YEARS	1	.7			1	.3			1	.5	2	1.0			1	.8				
21 TO 25 YEARS	1	.7			1	.3	1	.3												
26 TO 30 YEARS																				
31 TO 35 YEARS															1	.8				
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	150		150		400		400		200		200		125		125		275		275	
MEANS	2.25		2.10		1.76		1.45		1.27		1.34		.10		.97		.57		.40	
STANDARD DEVIATIONS	3.58		3.02		2.93		2.81		2.57		2.99		.52		3.74		1.56		1.08	
MEAN$_2$*	5.12		4.50		4.37		4.40		4.38		4.79									
STANDARD DEVIATION$_2$*	3.80		2.97		3.18		3.33		3.05		3.94									

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

Table 4-61 (continued)

TEACHING EXPERIENCE BIOLOGY

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	121	96.8	105	84.0	233	84.7	240	87.3	448	74.7	417	69.5	220	54.2	285	67.1	68	57.1	57	57.0
1 TO 5 YEARS	4	3.2	12	9.6	37	13.5	34	12.4	82	13.7	102	17.0	140	34.5	107	25.2	36	30.3	27	27.0
6 TO 10 YEARS			3	2.4	4	1.5	1	.4	34	5.7	44	7.3	30	7.4	23	5.4	9	7.6	8	8.0
11 TO 15 YEARS			2	1.6	1	.4			24	4.0	20	3.3	13	3.2	6	1.4	3	2.5	3	3.0
16 TO 20 YEARS			2	1.6					10	1.7	10	1.7			3	.7	1	.8	3	3.0
21 TO 25 YEARS									1	.2	5	.8	3	.7	1	.2			2	2.0
26 TO 30 YEARS									1	.2	1	.2					1	.8		
31 TO 35 YEARS			1	.8							1	.2								
36 TO 40 YEARS																	1	.8		
41 OR MORE YEARS																				
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	.10	**	1.24		.57		.40		1.77		2.12		2.21	**	1.55		2.55		2.84	
STANDARD DEVIATIONS	.52		4.17		1.56		1.08		4.01		4.50		3.50		3.03		5.17		4.98	
MEAN$_2$*	3.00		7.75		3.71		3.14		6.98		6.96		4.83		4.71		5.94		6.60	
STANDARD DEVIATION$_2$*	0.00		4.91		2.06		.83		5.04		5.73		3.76		3.62		6.51		5.74	

*Frequencies for "none" (i.e., no teaching experience in this field are omitted from the calculations.

TABLE A-62

TEACHING EXPERIENCE CHEMISTRY

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	778	97.3	783	97.9	2026	67.5	2222	74.1	598	74.8	631	78.9	338	64.4	374	71.2	82	65.6	84	67.2
1 TO 5 YEARS	19	2.4	15	1.9	735	24.5	621	20.7	156	19.5	129	16.1	135	25.7	119	22.7	28	22.4	35	28.0
6 TO 10 YEARS	2	.3	2	.3	149	5.0	89	3.0	28	3.5	25	3.1	32	6.1	14	2.7	9	7.2	2	1.6
11 TO 15 YEARS					50	1.7	41	1.4	12	1.5	10	1.3	10	1.9	10	1.9	2	1.6	4	3.2
16 TO 20 YEARS	1	.1			24	.8	17	.6	5	.6	3	.4	4	.8	7	1.3	4	3.2		
21 TO 25 YEARS					9	.3	7	.2	1	.1	1	.1	3	.6						
26 TO 30 YEARS					6	.2	2	.1			1	.1	3	.6						
31 TO 35 YEARS					1		1								1	.2				
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	.11		.08		1.63	**	1.22		1.20		1.03		1.94	*	1.44		2.03		1.38	
STANDARD DEVIATIONS	.87		.56		3.41		2.92		2.78		2.71		3.95		3.35		3.94		2.65	
MEAN$_2$*	4.14		3.59		5.02		4.71		4.76		4.86		5.43		5.02		5.91		4.22	
STANDARD DEVIATION$_2$*	3.34		1.61		4.28		4.06		3.72		4.02		5.00		4.61		4.73		3.08	

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

Table A-62 (continued)

TEACHING EXPERIENCE CHEMISTRY

	SECONDARY ACCEPTED		SEQUEN. L REJECTED		SECONDARY ACCEPTED		SEQUEN. M REJECTED		SECONDARY ACCEPTED		SEQUEN. H REJECTED		COLLEGE L ACCEPTED		COLLEGE L REJECTED		COLLEGE M ACCEPTED		COLLEGE M REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	90	60.0	103	68.7	229	57.3	280	70.0	148	74.0	154	77.0	109	87.2	119	95.2	184	66.9	208	75.6
1 TO 5 YEARS	49	32.7	38	25.3	130	32.5	102	25.5	46	23.0	38	19.0	14	11.2	2	1.6	46	16.7	37	13.5
6 TO 10 YEARS	8	5.3	5	3.3	26	6.5	8	2.0	5	2.5	6	3.0			2	1.6	24	8.7	18	6.5
11 TO 15 YEARS	2	1.3	2	1.3	10	2.5	6	1.5	1	.5	2	1.0	2	1.6	1	.8	9	3.3	5	1.8
16 TO 20 YEARS	1	.7			2	.5	2	.5							1	.8	5	1.8	3	1.1
21 TO 25 YEARS			2	1.3	3	.8	2	.5									5	1.8	3	1.1
26 TO 30 YEARS																			1	.4
31 TO 35 YEARS																	1	.4		
36 TO 40 YEARS																				
41 OR MORE YEARS																	1	.4		
TOTALS	150		150		400		400		200		200		125		125		275		275	
MEANS	1.70		1.51		2.08	**	1.33		.96		.94		.54		.42		2.65		1.71	
STANDARD DEVIATIONS	2.80		3.38		3.54		2.93		1.89		2.10		1.84		2.22		5.64		4.20	
MEAN$_2$*	4.25		4.81		4.87		4.42		3.67		4.09									
STANDARD DEVIATION$_2$*	2.97		4.55		3.97		3.88		1.97		2.54									

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

Table A-62 (continued)

TEACHING EXPERIENCE CHEMISTRY

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	109	87.2	117	93.6	184	66.9	208	75.6	400	66.7	416	69.3	252	62.1	296	69.6	86	72.3	78	78.0
1 TO 5 YEARS	14	11.2	4	3.2	46	16.7	37	13.5	95	15.8	111	18.5	114	28.1	102	24.0	21	17.6	17	17.0
6 TO 10 YEARS			2	1.6	24	8.7	18	6.5	54	9.0	38	6.3	26	6.4	11	2.6	6	5.0	3	3.0
11 TO 15 YEARS	2	1.6	1	.8	9	3.3	5	1.8	23	3.8	14	2.3	8	2.0	10	2.4	2	1.7		
16 TO 20 YEARS			1	.8	5	1.8	3	1.1	16	2.7	11	1.8	4	1.0	5	1.2			2	2.0
21 TO 25 YEARS					5	1.8	3	1.1	6	1.0	5	.8	1	.2			2	1.7		
26 TO 30 YEARS							1	.4	5	.8	4	.7	1	.2			2	1.7		
31 TO 35 YEARS					1	.4			1	.2	1	.2			1	.2				
36 TO 40 YEARS																				
41 OR MORE YEARS					1	.4														
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	.54		.47		2.65		1.71		2.69		2.13		1.91		1.52		2.01		1.11	
STANDARD DEVIATIONS	1.84		2.24		5.64		4.20		5.35		4.74		3.56		3.44		5.06		2.94	
MEAN_2*	4.25		7.38		8.00		7.03		8.08		6.94		5.05		5.02		7.24		5.05	
$\text{STANDARD DEVIATION}_2$*	3.31		5.27		7.30		5.94		6.53		6.33		4.21		4.64		7.40		4.44	

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

TABLE A-63

TEACHING EXPERIENCE EARTH SCIENCE

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	738	92.3	717	89.6	2650	88.3	2693	89.8	681	85.1	699	87.4	465	88.6	465	88.6	116	92.8	118	94.4
1 TO 5 YEARS	33	4.1	45	5.6	326	10.9	274	9.1	107	13.4	88	11.0	56	10.7	51	9.7	9	7.2	7	5.6
6 TO 10 YEARS	16	2.0	17	2.1	20	.7	23	.8	9	1.1	8	1.0	3	.6	5	1.0				
11 TO 15 YEARS	9	1.1	14	1.8	2	.1	3	.1	2	.3	1	.1			2	.4				
16 TO 20 YEARS	2	.3	4	.5			4	.1			3	.4			1	.2				
21 TO 25 YEARS	1	.1	3	.4	1		1						1	.2						
26 TO 30 YEARS					1		1		1	.1					1	.2				
31 TO 35 YEARS	1	.1					1				1	.1								
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	.55		.74		.41		.40		.56		.54		.41		.50		.22		.17	
STANDARD DEVIATIONS	2.46		2.80		1.33		1.59		1.73		2.03		1.47		1.99		.77		.69	
MEAN$_2$*	7.03		7.16		3.47		3.91		3.76		4.24		3.58		4.42		3.00		3.00	
STANDARD DEVIATION$_2$*	5.74		5.48		2.17		3.35		2.87		4.13		2.75		4.19		.00		.00	

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

Table A-63 (continued)

TEACHING EXPERIENCE EARTH SCIENCE

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H				COLLEGE L				COLLEGE M			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	134	89.3	125	83.3	359	89.8	367	91.8	186	93.0	192	96.0	117	93.6	117	93.6	255	92.7	265	96.4
1 TO 5 YEARS	15	10.0	24	16.0	39	9.8	28	7.0	14	7.0	8	4.0	5	4.0	5	4.0	19	6.9	9	3.3
6 TO 10 YEARS	1	.7	1	.7	2	.5	5	1.3					1	.8	1	.8	1	.4		
11 TO 15 YEARS													2	1.6	1	.8			1	.4
16 TO 20 YEARS															1	.8				
21 TO 25 YEARS																				
26 TO 30 YEARS																				
31 TO 35 YEARS																				
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	150		150		400		400		200		200		125		125		275		275	
MEANS	.35		.53		.33		.31		.21		.12		.39		.43		.24		.15	
STANDARD DEVIATIONS	1.09		1.25		1.04		1.15		.76		.58		1.85		2.15		.89		.94	
MEAN_2*	3.31		3.20		3.24		3.76		3.00		3.00									
$\text{STANDARD DEVIATION}_2$*	1.21		.98		1.08		1.79		.00		.00									

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

Table A-67 (continued)

TEACHING EXPERIENCE EARTH SCIENCE

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	117	93.6	117	93.6	255	92.7	265	96.4	556	92.7	542	90.3	351	86.5	376	88.5	114	95.8	89	89.0
1 TO 5 YEARS	5	4.0	5	4.0	19	6.9	9	3.3	34	5.7	41	6.8	51	12.6	42	9.9	5	4.2	9	9.0
6 TO 10 YEARS	1	.8	1	.8	1	.4			4	.7	9	1.5	3	.7	4	.9			1	1.0
11 TO 15 YEARS	2	1.6	1	.8			1	.4	4	.7	4	.7			2	.5				
16 TO 20 YEARS			1	.8					1	.2	2	.3							1	1.0
21 TO 25 YEARS													1	.2						
26 TO 30 YEARS															1	.2				
31 TO 35 YEARS									1	.2	2	.3								
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	.39		.43		.24		.15		.40		.58		.49		.50		.13		.53	
STANDARD DEVIATIONS	1.85		2.15		.89		.94		2.06		2.66		1.63		1.97		.60		2.10	
MEAN$_2$*	6.12		6.75		3.25		4.00		5.39		6.02		3.64		4.33		3.00		4.82	
STANDARD DEVIATION$_2$*	4.28		5.45		1.09		3.00		5.58		6.36		2.81		4.14		.00		4.41	

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

TABLE A-64

TEACHING EXPERIENCE GENERAL SCIENCE

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	102	12.8	73	9.1	1068	35.6	1169	39.0	215	26.9	251	31.4	210	40.0	214	40.8	52	41.6	54	43.2
1 TO 5 YEARS	260	32.5	278	34.8	1469	49.0	1413	47.1	417	52.1	399	49.9	244	46.5	240	45.7	52	41.6	53	42.4
6 TO 10 YEARS	256	32.0	245	30.6	342	11.4	295	9.8	121	15.1	107	13.4	57	10.9	45	8.6	15	12.0	15	12.0
11 TO 15 YEARS	110	13.8	104	13.0	81	2.7	90	3.0	31	3.9	30	3.8	10	1.9	18	3.4	2	1.6	3	2.4
16 TO 20 YEARS	40	5.0	54	6.8	27	.9	15	.5	9	1.1	5	.6	3	.6	3	.6	3	2.4		
21 TO 25 YEARS	18	2.3	20	2.5	11	.4	12	.4	6	.8	4	.5	1	.2	4	.8	1	.8		
26 TO 30 YEARS	7	.9	16	2.0	2	.1	4	.1	1	.1	3	.4			1	.2				
31 TO 35 YEARS	5	.6	7	.9			1				1	.1								
36 TO 40 YEARS	2	.3	2	.3			1													
41 OR MORE YEARS			1	.1																
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	7.29	*	7.97		3.00		2.83		3.69		3.43		2.66		2.83		3.03		2.54	
STANDARD DEVIATIONS	6.24		6.88		3.55		3.63		3.98		4.07		3.18		3.83		4.11		3.01	
MEAN_2*	8.35		8.77		4.65		4.64		5.04		4.99		4.43		4.78		5.19		4.48	
$\text{STANDARD DEVIATION}_2$*	6.10		6.79		3.46		3.64		3.85		4.05		3.01		3.94		4.22		2.71	

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

Table A-64 (continued)

TEACHING EXPERIENCE GENERAL SCIENCE

	SECONDARY SEQUEN. L ACCEPTED		SECONDARY SEQUEN. L REJECTED		SECONDARY SEQUEN. M ACCEPTED		SECONDARY SEQUEN. M REJECTED		SECONDARY SEQUEN. H ACCEPTED		SECONDARY SEQUEN. H REJECTED		COLLEGE L ACCEPTED		COLLEGE L REJECTED		COLLEGE M ACCEPTED		COLLEGE M REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	33	22.0	39	26.0	149	37.3	160	40.0	101	50.5	112	56.0	107	85.6	110	88.0	202	73.5	213	77.5
1 TO 5 YEARS	87	58.0	81	54.0	210	52.5	198	49.5	84	42.0	76	38.0	15	12.0	11	8.8	63	22.9	48	17.5
6 TO 10 YEARS	24	16.0	20	13.3	26	6.5	34	8.5	9	4.5	9	4.5	2	1.6	3	2.4	8	2.9	13	4.7
11 TO 15 YEARS	6	4.0	9	6.0	10	2.5	7	1.8	3	1.5	2	1.0	1	.8	1	.8	2	.7	1	.4
16 TO 20 YEARS					4	1.0	1	.3	3	1.5	1	.5								
21 TO 25 YEARS			1	.7	1	.3														
26 TO 30 YEARS																				
31 TO 35 YEARS																				
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	150		150		400		400		200		200		125		125		275		275	
MEANS	3.54		3.62		2.66		2.44		2.09		1.72		.59		.56		1.01		.95	
STANDARD DEVIATIONS	3.11		3.73		3.25		2.77		3.11		2.57		1.76		1.83		2.03		2.07	
MEAN$_2$*	4.54		4.89		4.24		4.06		4.21		3.91									
STANDARD DEVIATION$_2$*	2.07		3.56		3.20		2.50		3.26		2.56									

***Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.**

Table A-64 (continued)

TEACHING EXPERIENCE GENERAL SCIENCE

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	107	85.6	108	86.4	202	73.5	213	77.5	480	80.0	428	71.3	154	37.9	168	39.5	56	47.1	46	46.0
1 TO 5 YEARS	15	12.0	14	11.2	63	22.9	48	17.5	99	16.5	135	22.5	193	47.5	204	48.0	51	42.9	36	36.0
6 TO 10 YEARS	2	1.6	2	1.6	8	2.9	13	4.7	16	2.7	24	4.0	46	11.3	36	8.5	11	9.2	9	9.0
11 TO 15 YEARS	1	.8	1	.8	2	.7	1	.4	4	.7	11	1.8	9	2.2	12	2.8	1	.8	6	6.0
16 TO 20 YEARS									1	.2	2	.3	3	.7	2	.5			1	1.0
21 TO 25 YEARS													1	.2	2	.5			2	2.0
26 TO 30 YEARS															1	.2				
31 TO 35 YEARS																				
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	.59		.57		1.01		.95		.83 **		1.29		2.81		2.74		2.13 *		3.22	
STANDARD DEVIATIONS	1.76		1.75		2.03		2.07		2.04		2.66		3.32		3.58		2.57		4.75	
MEAN$_2$*	4.11		4.18		3.82		4.21		4.12		4.51		4.53		4.54		4.03		5.96	
STANDARD DEVIATION$_2$*	2.66		2.73		2.19		2.32		2.70		3.19		3.14		3.62		2.21		5.05	

***Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.**

TABLE A-65

TEACHING EXPERIENCE MATHEMATICS

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	82	10.3	75	9.4	984	32.8	1007	33.6	311	38.9	312	39.0	151	28.8	164	31.2	63	50.4	51	40.8
1 TO 5 YEARS	254	31.8	261	32.6	1301	43.4	1393	46.4	320	40.0	322	40.3	243	46.3	262	49.9	38	30.4	50	40.0
6 TO 10 YEARS	253	31.6	223	27.9	400	13.3	325	10.8	106	13.3	86	10.8	72	13.7	47	9.0	14	11.2	12	9.6
11 TO 15 YEARS	118	14.8	110	13.8	183	6.1	150	5.0	36	4.5	46	5.8	28	5.3	26	5.0	7	5.6	9	7.2
16 TO 20 YEARS	45	5.6	59	7.4	78	2.6	61	2.0	18	2.3	12	1.5	19	3.6	15	2.9	2	1.6	2	1.6
21 TO 25 YEARS	23	2.9	29	3.6	25	.8	36	1.2	3	.4	13	1.6	4	.8	6	1.1				
26 TO 30 YEARS	16	2.0	30	3.8	19	.6	18	.6	3	.4	6	.8	7	1.3	3	.6	1	.8	1	.8
31 TO 35 YEARS	7	.9	8	1.0	7	.2	8	.3	2	.3	2	.3			2	.4				
36 TO 40 YEARS	2	.3	4	.5	3	.1	2	.1	1	.1	1	.1	1	.2						
41 OR MORE YEARS			1	.1																
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	8.02	*	8.78	*	4.11		3.83		3.57		3.80		4.45		3.92		3.05		3.42	
STANDARD DEVIATIONS	6.78		7.73		5.25		5.13		4.86		5.44		5.57		5.21		4.64		4.65	
MEAN$_2$*	8.93		9.69		6.12		5.77		5.84		6.23		6.25		5.70		6.15		5.77	
STANDARD DEVIATION$_2$*	6.56		7.56		5.37		5.34		5.04		5.79		5.69		5.42		4.94		4.93	

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

Table A-65 (continued)

TEACHING EXPERIENCE MATHEMATICS

	SECONDARY SEQUEN. L ACCEPTED		SECONDARY SEQUEN. L REJECTED		SECONDARY SEQUEN. M ACCEPTED		SECONDARY SEQUEN. M REJECTED		SECONDARY SEQUEN. H ACCEPTED		SECONDARY SEQUEN. H REJECTED		COLLEGE L ACCEPTED		COLLEGE L REJECTED		COLLEGE M ACCEPTED		COLLEGE M REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	53	35.3	61	40.7	115	28.8	124	31.0	42	21.0	47	23.5	72	57.6	94	75.2	96	34.9	90	32.7
1 TO 5 YEARS	59	39.3	65	43.3	182	45.5	209	52.3	113	56.5	113	56.5	30	24.0	19	15.2	86	31.3	87	31.6
6 TO 10 YEARS	21	14.0	15	10.0	57	14.3	46	11.5	27	13.5	22	11.0	14	11.2	4	3.2	44	16.0	51	18.5
11 TO 15 YEARS	9	6.0	3	2.0	32	8.0	11	2.8	11	5.5	10	5.0	4	3.2	2	1.6	21	7.6	20	7.3
16 TO 20 YEARS	5	3.3	2	1.3	6	1.5	7	1.8	5	2.5	3	1.5	4	3.2	2	1.6	13	4.7	12	4.4
21 TO 25 YEARS	3	2.0	3	2.0	5	1.3	3	.8			2	1.0			1	.8	6	2.2	4	1.5
26 TO 30 YEARS					3	.8			1	.5	1	.5			3	2.4	5	1.8	6	2.2
31 TO 35 YEARS			1	.7					1	.5	2	1.0	1	.8			2	.7	5	1.8
36 TO 40 YEARS																	2	.7		
41 OR MORE YEARS																				
TOTALS	150		150		400		400		200		200		125		125		275		275	
MEANS	4.14		3.28		4.31 **		3.33		4.25		4.20		2.87		2.06		5.59		5.71	
STANDARD DEVIATIONS	5.18		5.00		5.04		3.90		4.74		5.28		5.05		5.48		7.36		7.29	
MEAN$_2$*	6.40		5.53		6.05		4.83		5.37		5.48									
STANDARD DEVIATION$_2$*	5.20		5.46		5.02		3.85		4.73		5.43									

***Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.**

Table A-65 (continued)

TEACHING EXPERIENCE MATHEMATICS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	72	57.6	88	70.4	96	34.9	90	32.7	363	60.5	271	45.2	123	30.3	135	31.8	28	23.5	29	29.0
1 TO 5 YEARS	30	24.0	22	17.6	86	31.3	87	31.6	161	26.8	190	31.7	192	47.3	213	50.1	51	42.9	49	49.0
6 TO 10 YEARS	14	11.2	6	4.8	44	16.0	51	18.5	47	7.8	68	11.3	55	13.5	41	9.6	17	14.3	6	6.0
11 TO 15 YEARS	4	3.2	2	1.6	21	7.6	20	7.3	18	3.0	40	6.7	23	5.7	18	4.2	5	4.2	8	8.0
16 TO 20 YEARS	4	3.2	3	2.4	13	4.7	12	4.4	6	1.0	19	3.2	9	2.2	11	2.6	10	8.4	4	4.0
21 TO 25 YEARS			1	.8	6	2.2	4	1.5	1	.2	7	1.2	2	.5	4	.9	2	1.7	2	2.0
26 TO 30 YEARS			3	2.4	5	1.8	6	2.2	1	.2	2	.3	2	.5	2	.5	5	4.2	1	1.0
31 TO 35 YEARS	1	.8			2	.7	5	1.8	3	.5	3	.5			1	.2			1	1.0
36 TO 40 YEARS					2	.7											1	.8		
41 OR MORE YEARS																				
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	2.87		2.41		5.59		5.71		2.25	**	3.82		3.99		3.72		6.37		4.78	
STANDARD DEVIATIONS	5.05		5.69		7.36		7.29		4.27		5.59		4.58		4.86		7.79		6.41	
MEAN$_2$*	6.77		8.14		8.59		8.49		5.70		6.97		5.58		5.45		8.33		9.37	
STANDARD DEVIATION$_2$*	5.82		7.93		7.59		7.44		5.16		5.86		4.55		5.02		7.94		8.49	

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

TABLE A-66

TEACHING EXPERIENCE PHYSICS

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	780	97.5	790	98.8	2177	72.6	2378	79.3	643	80.4	679	84.9	377	71.8	401	76.4	94	75.2	93	74.4
1 TO 5 YEARS	16	2.0	7	.9	654	21.8	517	17.2	127	15.9	105	13.1	114	21.7	102	19.4	26	20.8	27	21.6
6 TO 10 YEARS	3	.4	3	.4	116	3.9	69	2.3	18	2.3	11	1.4	25	4.8	13	2.5	4	3.2	3	2.4
11 TO 15 YEARS	1	.1			34	1.1	16	.5	8	1.0	1	.1	6	1.1	2	.4	1	.8	2	1.6
16 TO 20 YEARS					11	.4	9	.3	4	.5	3	.4	2	.4	3	.6				
21 TO 25 YEARS					3	.1	6	.2							2	.4				
26 TO 30 YEARS					3	.1	3	.1			1	.1	1	.2	1	.2				
31 TO 35 YEARS					2	.1	2	.1							1	.2				
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	.11		.06		1.25	**	.92		.88	*	.62		1.30		1.14		.98		1.05	
STANDARD DEVIATIONS	.78		.56		2.83		2.57		2.32		2.02		2.82		3.18		2.07		2.25	
MEAN$_2$*	4.25		4.50		4.56		4.44		4.46		4.12		4.62		4.81		3.97		4.09	
STANDARD DEVIATION$_2$*	2.68		2.29		3.76		4.04		3.40		3.55		3.59		5.01		2.35		2.72	

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

Table A-66 (continued)

TEACHING EXPERIENCE PHYSICS

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H				COLLEGE L				COLLEGE M			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREC.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	107	71.3	115	76.7	263	65.8	292	73.0	139	69.5	162	81.0	86	68.8	111	88.8	182	66.2	191	69.5
1 TO 5 YEARS	35	23.3	25	16.7	111	27.8	87	21.8	55	27.5	36	18.0	23	18.4	10	8.0	70	25.5	54	19.6
6 TO 10 YEARS	7	4.7	7	4.7	19	4.8	13	3.3	4	2.0	2	1.0	5	4.0	2	1.6	9	3.3	21	7.6
11 TO 15 YEARS	1	.7	2	1.3	5	1.3	5	1.3	1	.5			7	5.6			9	3.3	8	2.9
16 TO 20 YEARS					2	.5	1	.3					4	3.2	2	1.6	3	1.1	1	.4
21 TO 25 YEARS			1	.7			2	.5	1	.5							1	.4		
26 TO 30 YEARS																	1	.4		
31 TO 35 YEARS																				
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	150		150		400		400		200		200		125		125		275		275	
MEANS	1.16		1.20		1.47		1.24		1.17	**	.62		2.18		.66		1.83		1.64	
STANDARD DEVIATIONS	2.20		2.97		2.66		2.84		2.42		1.37		4.39		2.54		3.85		3.17	
MEAN_2*	4.05		5.14		4.28		4.57		3.82		3.26									
$\text{STANDARD DEVIATION}_2$*	2.30		4.19		2.96		3.82		3.03		1.12									

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

Table A-66 (continued)

TEACHING EXPERIENCE PHYSICS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	86	68.8	108	86.4	182	66.2	191	69.5	417	69.5	416	69.3	274	67.5	313	73.6	103	86.6	88	88.0
1 TO 5 YEARS	23	18.4	13	10.4	70	25.5	54	19.6	113	18.8	133	22.2	102	25.1	93	21.9	12	10.1	9	9.0
6 TO 10 YEARS	5	4.0	2	1.6	9	3.3	21	7.6	43	7.2	30	5.0	22	5.4	13	3.1	3	2.5		
11 TO 15 YEARS	7	5.6			9	3.3	8	2.9	11	1.8	12	2.0	5	1.2	2	.5	1	.8		
16 TO 20 YEARS	4	3.2	2	1.6	3	1.1	1	.4	6	1.0	3	.5	2	.5	2	.5			1	1.0
21 TO 25 YEARS					1	.4			6	1.0	2	.3			1	.2			1	1.0
26 TO 30 YEARS					1	.4			1	.2	3	.5	1	.2					1	1.0
31 TO 35 YEARS									1	.2					1	.2				
36 TO 40 YEARS									1	.2	1	.2								
41 OR MORE YEARS									1	.2										
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	2.18	**	.73		1.83		1.64		2.02		1.70		1.50		1.18		.61		.96	
STANDARD DEVIATIONS	4.39		2.57		3.85		3.17		4.73		3.92		3.01		2.94		1.88		4.03	
MEAN_2*	6.97		5.35		5.42		5.38		6.63		5.53		4.63		4.47		4.56		8.00	
$\text{STANDARD DEVIATION}_2$*	5.33		4.89		4.95		3.57		6.55		5.39		3.67		4.26		2.91		9.01	

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

TABLE A-67

TEACHING EXPERIENCE OTHER

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	797	99.6	800	100	2945	98.2	2963	98.8	780	97.5	784	98.0	509	97.0	518	98.7	125	100	124	99.2
1 TO 5 YEARS	2	.3			30	1.0	25	.8	8	1.0	9	1.1	10	1.9	6	1.1			1	.8
6 TO 10 YEARS	1	.1			12	.4	8	.3	4	.5	4	.5	4	.8	1	.2				
11 TO 15 YEARS					9	.3	2	.1	6	.8	1	.1	1	.2						
16 TO 20 YEARS					3	.1	2	.1	1	.1	2	.3	1	.2						
21 TO 25 YEARS					1				1	.1										
26 TO 30 YEARS																				
31 TO 35 YEARS																				
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	
MEANS	.02				.13		.07		.22		.14		.18		.05				.02	
STANDARD DEVIATIONS	.32				1.15		.75		1.64		1.19		1.25		.47				.26	
MEAN$_2$*	4.67				6.91		5.43		8.75		6.75		5.81		3.71				3.00	
STANDARD DEVIATION$_2$*	2.36				5.11		4.13		5.76		5.15		4.32		1.75				.00	

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

Table A-67 (continued)

TEACHING EXPERIENCE OTHER

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H				COLLEGE L				COLLEGE M			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	145	96.7	145	96.7	396	99.0	399	99.8	194	97.0	200	100	65	52.0	98	78.4	229	83.3	258	93.8
1 TO 5 YEARS	4	2.7	5	3.3	1	.3	1	.3	5	2.5			28	22.4	15	12.0	30	10.9	14	5.1
6 TO 10 YEARS					3	.8							20	16.0	7	5.6	9	3.3	1	.4
11 TO 15 YEARS	1	.7											4	3.2	2	1.6	4	1.5		
16 TO 20 YEARS									1	.5			8	6.4	2	1.6	3	1.1	2	.7
21 TO 25 YEARS																				
26 TO 30 YEARS															1	.8				
31 TO 35 YEARS																				
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	150		150		400		400		200		200		125		125		275		275	
MEANS	.17		.10		.07		.01		.17				3.52		1.53		.97		.31	
STANDARD DEVIATIONS	1.15		.53		.70		.15		1.34				5.10		4.06		2.85		1.71	
MEAN$_2$*	5.00		3.00		6.75		3.00		5.50											
STANDARD DEVIATION$_2$*	4.00		.00		2.16		.00		5.59											

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

Table A-67 (continued)

TEACHING EXPERIENCE OTHER

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	65	52.0	93	74.4	229	83.3	258	93.8	517	86.2	534	89.0	392	96.6	419	98.6	117	98.3	99	99.0
1 TO 5 YEARS	28	22.4	18	14.4	30	10.9	14	5.1	50	8.3	44	7.3	9	2.2	6	1.4	1	.8		
6 TO 10 YEARS	20	16.0	8	6.4	9	3.3	1	.4	21	3.5	8	1.3	3	.7			1	.8	1	1.0
11 TO 15 YEARS	4	3.2	2	1.6	4	1.5			7	1.2	7	1.2	1	.2						
16 TO 20 YEARS	8	6.4	3	2.4	3	1.1	2	.7	5	.8	5	.8	1	.2						
21 TO 25 YEARS											2	.3								
26 TO 30 YEARS			1	.8																
31 TO 35 YEARS																				
36 TO 40 YEARS																				
41 OR MORE YEARS																				
TOTALS	125		125		275		275		600		600		406		425		119		100	
MEANS	3.52	**	1.81		.97	**	.31		.83		.71		.20	*	.04		.09		.08	
STANDARD DEVIATIONS	5.10		4.34		2.85		1.71		2.64		2.73		1.35		.35		.77		.79	
$MEAN_2$*	7.33		7.06		5.83		5.06		6.01		6.41		5.86		3.00		5.50		8.00	
$STANDARD\ DEVIATION_2$*	5.12		6.05		4.50		4.87		5.00		5.58		4.52		.00		2.50		.00	

*Frequencies for "none" (i.e., no teaching experience in this field) are omitted from the calculations.

TABLE A-68

PROFESSIONAL EXPERIENCE PAST 5 YEARS

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY OR LEAVE OF ABS.			1	.1	5	.2	5	.2	2	.3	1	.1	1	.2			1	.8		
ELEMENTARY SCI &/OR MATH	37	4.6	28	3.5	4	.1	2	.1	2	.3	1	.1								
ELEM NON-SCI, NON-MATH	3	.4	1	.1																
HIGH SCHOOL SCI &/OR MATH	5	.6	21	2.6	2381	79.4 **	2249	75.0	551	68.9	529	66.1	442	84.2 **	380	72.4	114	91.2 **	95	76.0
H.S. NON-SCI, NON-MATH	1	.1	1	.1	22	.7	43	1.4	17	2.1	30	3.8	4	.8	3	.6			8	6.4
COLLEGE SCI &/OR MATH	1	.1			7	.2	7	.2			2	.3			2	.4			2	1.6
COL NON-SCI, NON-MATH	1	.1	2	.3	2	.1			1	.1										
ELEM NON-SCI & SCI &/OR MATH	508	63.5	524	65.5	2	.1	4	.1	1	.1	2	.3								
H.S. NON-SCI & SCI &/OR MATH	13	1.6	25	3.1	397	13.2 **	505	16.8	146	18.3 **	190	23.8	60	11.4 **	93	17.7	7	5.6	10	8.0
ELEM & HS SCI &/OR MATH	11	1.4 *	14	1.8	39	1.3	31	1.0	16	2.0	11	1.4	1	.2	2	.4	1	.8	3	2.4
ELEM & HS NON-SCI, NONMATH																				
HS & COL SCI &/OR MATH					38	1.3	37	1.2	8	1.0	1	.1	4	.8	15	2.9	1	.8	1	.8
HS & COL NON-SCI NON-MATH					2	.1	2	.1	2	.3	1	.1								
WORK, NOT TEACH, SCI OR MATH					7	.2	7	.2	3	.4	1	.1	2	.4					1	.8
OTHER DUTIES, INCL. ADMIN	160	20.0 **	93	11.6	11	.4	18	.6	1	.1	5	.6	6	1.1	6	1.1			4	3.2
ELEM & HS NON-SCI & SCI	60	7.5	90	11.3	75	2.5	78	2.6	48	6.0 **	25	3.1	5	1.0	21	4.0	1	.8		
COL NON-SCI & SCI &/OR MATH							1												1	.8
HS & COL NON-SCI & SCI &/OR MATH					8	.3	11	.4	2	.3	1	.1			3	.6				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

Table A-68 (continued)

PROFESSIONAL EXPERIENCE PAST 5 YEARS

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H				COLLEGE L				COLLEGE M			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY OR LEAVE OF ABS.			1	.7							1	.5			1	.8				
ELEMENTARY SCI &/OR MATH									2	1.0										
ELEM NON-SCI, NON-MATH															1	.8				
HIGH SCHOOL SCI &/OR MATH	112	74.7	118	78.7	313	78.3	331	82.8	184	92.0**	163	81.5							3	1.1
H.S. NON-SCI, NON-MATH							1	.3					1	.8			1	.4	7	2.5
COLLEGE SCI &/OR MATH					3	.8			3	1.5	1	.5	85	68.0	39	31.2	186	67.6	158	57.5
COL NON-SCI, NON-MATH					1	.3							26	20.8	59	47.2	17	6.2	45	16.4
ELEM NON-SCI & SCI &/OR MATH	1	.7					1	.3												
H.S. NON-SCI & SCI &/OR MATH	26	17.3	31	20.7	45	11.3	43	10.8	9	4.5	26	13.0			1	.8	1	.4		
ELEM & HS SCI &/OR MATH	1	.7			9	2.3	6	1.5	1	.5	2	1.0					1	.4		
ELEM & HS NON-SCI NONMATH																				
HS & COL SCI &/OR MATH					19	4.8	4	1.0			5	2.5	4	3.2	4	3.2	45	16.4	50	18.2
HS & COL NON-SCI NON-MATH							1	.3					1	.8	8	6.4	5	1.8	6	2.2
WORK, NOT TEACH, SCI OR MATH	1	.7					2	.5							4	3.2	2	.7	1	.4
OTHER DUTIES, INCL. ADMIN					4	1.0	1	.3											1	.4
ELEM & HS NON-SCI & SCI	8	5.3			3	.8	6	1.5	1	.5	2	1.0					1	.4	1	.4
COL NON-SCI & SCI &/OR MATH													7	5.6	4	3.2	14	5.1	1	.4
HS & COL NON-SCI & SCI &/OR MATH	1	.7			3	.8	4	1.0					1	.8	4	3.2	2	.7	2	.7
TOTALS	150		150		400		400		200		200		125		125		275		275	

Table A-68 (continued)

PROFESSIONAL EXPERIENCE PAST 5 YEARS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY OR LEAVE OF ABS.			1	.8							1	.2	1	.2						
ELEMENTARY SCI &/OR MATH																				
ELEM NON-SCI, NON-MATH			1	.8																
HIGH SCHOOL SCI &/OR MATH							3	1.1			5	.8	355	87.4**	314	73.9	87	73.1	66	66.0
H.S. NON-SCI, NON-MATH	1	.8			1	.4	7	2.5			2	.3	4	1.0	3	.7				
COLLEGE SCI &/OR MATH	85	68.0	48	38.4	186	67.6 *	158	57.5	461	76.8	427	71.2			2	.5				
COL NON-SCI, NON-MATH	26	20.8	48	38.4	17	6.2	45	16.4	54	9.0	54	9.0								
ELEM NON-SCI & SCI &/OR MATH																				
H.S. NON-SCI & SCI &/OR MATH			1	.8	1	.4			1	.2	1	.2	31	7.6 **	73	17.2	29	24.4	20	20.0
ELEM & HS SCI &/OR MATH					1	.4									2	.5	1	.8		
ELEM & HS NON-SCI NONMATH																				
HS & COL SCI &/OR MATH	4	3.2	6	4.8	45	16.4	50	18.2	60	10.0	79	13.2	4	1.0	10	2.4			5	5.0
HS & COL NON-SCI NON-MATH	1	.8	7	5.6	5	1.8	6	2.2			3	.5								
WORK, NOT TEACH, SCI OR MATH			5	4.0	2	.7	1	.4	14	2.3	17	2.8	1	.2			1	.8		
OTHER DUTIES, INCL. ADMIN							1	.4			1	.2	6	1.5	6	1.4				
ELEM & HS NON-SCI & SCI					1	.4	1	.4			1	.2	4	1.0	13	3.1	1	.8	8	8.0
COL NON-SCI & SCI &/OR MATH	7	5.6	4	3.2	14	5.1	1	.4	8	1.3	5	.8								
HS & COL NON-SCI & SCI &/OR MATH	1	.8	4	3.2	2	.7	2	.7	2	.3	4	.7			2	.5			1	1.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-69

CERTIFICATION STATUS

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CERTIFICATE	13	1.6	21	2.6	118	3.9	96	3.2	23	2.9	26	3.3	21	4.0	23	4.4	2	1.6	3	2.4
ELEMENTARY - TEMPORARY	21	2.6	48	6.0			1													
SECONDARY - TEMPORARY	3	.4	11	1.4	361	12.0**	529	17.6	86	10.8	147	18.4	56	10.7	93	17.7	16	12.8	18	14.4
ELEMENTARY - PERMANENT	694	86.8	632	79.0	7	.2	8	.3	2	.3	1	.1								
SECONDARY - PERMANENT	62	7.8	83	10.4	2496	83.2**	2357	78.6	688	86.0	624	78.0	448	85.3	409	77.9	107	85.6	102	81.6
COLLEGE - PERMANENT	3	.4	1	.1	11	.4	5	.2	1	.1	1	.1							2	1.6
MORE THAN ONE CREDENTIAL	4	.5	4	.5	7	.2	4	.1			1	.1								
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CERTIFICATE	2	1.3	6	4.0	24	6.0	14	3.5	9	4.5	9	4.5
ELEMENTARY - TEMPORARY												
SECONDARY - TEMPORARY	23	15.3	18	12.0	50	12.5	78	19.5	28	14.0	35	17.5
ELEMENTARY - PERMANENT	2	1.3	1	.7			1	.3				
SECONDARY - PERMANENT	123	82.0	123	82.0	320	80.0	306	76.5	156	78.0	154	77.0
COLLEGE - PERMANENT			1	.7	3	.8			7	3.5.	1	.5
MORE THAN ONE CREDENTIAL			1	.7	3	.8	1	.3			1	.5
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO CERTIFICATE	71	56.8	70	56.0	112	40.7	104	37.8	349	58.2**	265	44.2	15	3.7	16	3.8	6	5.0	7	7.0
ELEMENTARY - TEMPORARY																				
SECONDARY - TEMPORARY	3	2.4	2	1.6	10	3.6	11	4.0	9	1.5	5	.8	39	9.6	78	18.4	17	14.3	15	15.0
ELEMENTARY - PERMANENT											1	.2								
SECONDARY - PERMANENT	38	30.4	31	24.8	106	38.5	94	34.2	70	11.7	125	20.8	352	86.7	331	77.9	96	80.7	78	78.0
COLLEGE - PERMANENT	13	10.4	22	17.6	47	17.1	66	24.0	172	28.7	204	34.0								
MORE THAN ONE CREDENTIAL																				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-70

CERTIFICATION DEFICIENCY

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ELEMENTARY NO DEFICIENCY	691	86.4**	613	76.6	7	.2	9	.3	1	.1	2	.3								
ELEM SCIENCE OR MATH	15	1.9**	36	4.5	1				1	.1										
ELEM EDUCATION	16	2.0	31	3.9	1		1		1	.1										
ELEM SCI OR MATH & EDUC.	3	.4	11	1.4																
ELEM OTHER	6	.8	12	1.5	7	.2**	1												1	.8
SECONDARY NO DEFICIENCY	58	7.3	78	9.8	2516	83.9	2428	80.9	642	80.3	613	76.6	475	90.5	427	81.3	116	92.8	107	85.6
SEC SCIENCE OR MATH	5	.6	10	1.3	269	9.0	294	9.8	113	14.1	113	14.1	25	4.8**	48	9.1	1	.8	6	4.8
SEC EDUCATION	1	.1	3	.4	85	2.8	113	3.8	14	1.8	28	3.5	11	2.1	21	4.0	1	.8	2	1.6
SEC SCI OR MATH & EDUC			3	.4	61	2.0	98	3.3	19	2.4	31	3.9	3	.6	18	3.4	6	4.8	3	2.4
SEC OTHER *	2	.3	1	.1	48	1.6	52	1.7	9	1.1	13	1.6	11	2.1	11	2.1	1	.8	4	3.2
NOT APPLICABLE	3	.4	2	.3	5	.2	4	.1											2	1.6
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ELEMENTARY NO DEFICIENCY	2	1.3	2	1.3	3	.8	1	.3				
ELEM SCIENCE OR MATH												
ELEM EDUCATION												
ELEM SCI OR MATH & EDUC.												
ELEM OTHER									7	3.5		
SECONDARY NO DEFICIENCY	110	73.3	121	80.7	327	81.8	327	81.8	171	85.5	171	85.5
SEC SCIENCE OR MATH	21	14.0	18	12.0	32	8.0	29	7.3	10	5.0	9	4.5
SEC EDUCATION	9	6.0	3	2.0	17	4.3	24	6.0	9	4.5	7	3.5
SEC SCI CR MATH & EDUC	4	2.7	5	3.3	11	2.8	14	3.5	2	1.0	8	4.0
SEC OTHER	4	2.7	1	.7	5	1.3	4	1.0	1	.5	4	2.0
NOT APPLICABLE					5	1.3	1	.3			1	.5
TOTALS	150		150		400		400		200		200	

Table A-70 (continued)

CERTIFICATION DEFICIENCY

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ELEMENTARY NO DEFICIENCY			1	.8							2	.3								
ELEM SCIENCE OR MATH																				
ELEM EDUCATION																				
ELEM SCI OR MATH & EDUC.																				
ELEM OTHER					2	.7			1	.2										
SECONDARY NO DEFICIENCY	56	44.8	41	32.8	142	51.6	117	42.5	77	12.8	151	25.2	372	91.6**	344	80.9	103	86.6	83	83.0
SEC SCIENCE OR MATH	1	.8	1	.8	1	.4	4	1.5	3	.5	3	.5	19	4.7**	40	9.4	6	5.0	8	8.0
SEC EDUCATION	5	4.0	1	.8	2	.7	5	1.8	9	1.5	8	1.3	8	2.0	19	4.5	3	2.5	2	2.0
SEC SCI OR MATH & EDUC			3	2.4	6	2.2	3	1.1			1	.2	1	.2	15	3.5	2	1.7	3	3.0
SEC OTHER	2	1.6			5	1.8	1	.4	2	.3	1	.2	6	1.5	7	1.6	5	4.2	4	4.0
NOT APPLICABLE	61	48.8	78	62.4	117	42.5	145	52.7	508	84.7	434	72.3								
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-71

POSITION

	ELEMENTARY ACCEPTED		ELEMENTARY REJECTED		SECONDARY ACCEPTED		COMBINED REJECTED		SECONDARY ACCEPTED		UNITARY L REJECTED		SECONDARY ACCEPTED		UNITARY M REJECTED		SECONDARY ACCEPTED		UNITARY H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	2	.3	1	.1	5	.2	6	.2	1	.1	1	.1					1	.8	1	.8
COACH ATHLETIC							1													
COACH TUTOR					1															
COUNSELOR			1	.1	4	.1	7	.2	2	.3	2	.3			3	.6				
DEPARTMENT HEAD	2	.3	9	1.1	196	6.5**	141	4.7	35	4.4	32	4.0	46	8.8 *	28	5.3	15	12.0	5	4.0
LAB SUPERVISOR																				
LAB TECHNICIAN							1								1	.2				
LIBRARIAN	1	.1																		
PRINCIPAL	143	17.9	121	15.1	5	.2	20	.7	1	.1	8	1.0	1	.2	6	1.1			1	.8
PRINCIPAL-TEACHER	52	6.5	39	4.9	38	1.3	48	1.6	11	1.4	19	2.4	3	.6	4	.8	3	2.4	1	.8
SUPERINTENDENT	3	.4	2	.3			4	.1			1	.1							2	1.6
SUPERVISOR	73	9.1**	25	3.1	29	1.0	12	.4	1	.1	1	.1	14	2.7	4	.8	3	2.4	3	2.4
TEACHER	521	65.1**	598	74.8	2717	90.6	2748	91.6	747	93.4	735	91.9	460	87.6	476	90.7	103	82.4	109	87.2
PROFESSOR OR INSTRUCTOR	2	.3	1	.1	2	.1	12	.4			1	.1			3	.6			3	2.4
OTHER	1	.1	3	.4	3	.1			2	.3			1	.2						
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY ACCEPTED		SEQUEN. L REJECTED		SECONDARY ACCEPTED		SEQUEN. M REJECTED		SECONDARY ACCEPTED		SEQUEN. H REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY					1	.3			1	.5	3	1.5
COACH ATHLETIC												
COACH TUTOR	1	.7										
COUNSELOR					2	.5	1	.3				
DEPARTMENT HEAD	7	4.7	7	4.7	22	5.5	14	3.5	14	7.0	9	4.5
LAB SUPERVISOR												
LAB TECHNICIAN												
LIBRARIAN												
PRINCIPAL	2	1.3					1	.3				
PRINCIPAL-TEACHER	2	1.3	1	.7	6	1.5	4	1.0	1	.5	3	1.5
SUPERINTENDENT												
SUPERVISOR					5	1.3	1	.3			2	1.0
TEACHER	138	92.0	142	94.7	363	90.8	378	94.5	183	91.5	182	91.0
PROFESSOR OR INSTRUCTOR					1	.3	1	.3	1	.5	1	.5
OTHER												
TOTALS	150		150		400		400		200		200	

Table A-71 (continued)

POSITION

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY					1	.4	1	.4	2	.3	2	.3								
COACH ATHLETIC																				
COACH TUTOR																				
COUNSELOR											1	.2			2	.5			1	1.0
DEPARTMENT HEAD	12	9.6	11	8.8	21	7.6	14	5.1	45	7.5	39	6.5	37	9.1	22	5.2	9	7.6	6	6.0
LAB SUPERVISOR					1	.4														
LAB TECHNICIAN											1	.2							1	1.0
LIBRARIAN																				
PRINCIPAL									1	.2					6	1.4	1	.8		
PRINCIPAL-TEACHER													2	.5	4	.9	1	.8		
SUPERINTENDENT																				
SUPERVISOR			1	.8	1	.4	3	1.1	1	.2	2	.3	12	3.0	4	.9	2	1.7		
TEACHER					4	1.5			3	.5	14	2.3	354	87.2	384	90.4	106	89.1	92	92.0
PROFESSOR OR INSTRUCTOR	113	90.4	113	90.4	245	89.1	257	93.5	548	91.3	539	89.8			3	.7				
OTHER					2	.7					2	.3	1	.2						
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-72

PUBLIC OR PRIVATE SCHOOL STAFF

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	339	42.4	328	41.0	923	30.7	878	29.2	181	22.6	120	15.0	132	25.1	152	29.0	39	31.2	47	37.6
PUBLIC	411	51.4 *	399	49.9	1800	59.9	1857	61.8	560	70.0	627	78.4	353	67.2	323	61.5	77	61.6	71	56.8
PRIVATE	50	6.2	73	9.1	277	9.2	265	8.8	59	7.4	53	6.6	40	7.6	50	9.5	9	7.2	7	5.6
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	68	45.3	55	36.7	185	46.2	187	46.8	78	39.0	70	35.0
PUBLIC	66	44.0	77	51.3	171	42.8	181	45.2	90	45.0	106	53.0
PRIVATE	16	10.7	18	12.0	44	11.0	32	8.0	32	16.0	24	12.0
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	61	48.8	37	29.6	87	31.6	73	26.5	192	32.0	157	26.2	94	23.2	119	28.0	38	31.9	33	33.0
PUBLIC	51	40.8	60	48.0	132	48.0	155	56.4	249	41.5*	301	50.2	299	73.6	268	63.1	54	45.4	55	55.0
PRIVATE	13	10.4	28	22.4	56	20.4	47	17.1	159	26.5	142	23.7	13	3.2	38	8.9	27	22.7	12	12.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-73

TYPE OF SCHOOL WHERE APPLICANT TEACHES

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ELEMENTARY	574	71.8	**522	65.3	13	.4	23	.8	4	.5	8	1.0	2	.4	1	.2				
JUNIOR HIGH	3	.4	18	2.3	595	19.8	**724	24.1	271	33.9	255	31.9	74	14.1	**111	21.1	9	7.2	19	15.2
SENIOR HIGH	2	.3	1	.1	1548	51.6	**1386	46.2	267	33.4	**331	41.4	325	61.9	**248	47.2	90	72.0	* 73	58.4
JUNIOR COLLEGE			1	.1	3	.1	4	.1			1	.1			2	.4				
COLLEGE	3	.4	3	.4	5	.2	8	.3					1	.2	1	.2			2	1.6
JUNIOR HIGH & SR HIGH	2	.3	4	.5	542	18.1	538	17.9	142	17.8	118	14.8	79	15.0	* 106	20.2	21	16.8	25	20.0
HIGH SCHOOL & JR COLLEGE					15	.5	13	.4			1	.1	3	.6	3	.6				
ELEMENTARY & JR. HIGH	157	19.6	174	21.8	80	2.7	96	3.2	51	6.4	43	5.4	4	.8	9	1.7			1	.8
ELEM & JR HIGH & SR HIGH	57	7.1	75	9.4	190	6.3	205	6.8	62	7.8	* 41	5.1	35	6.7	44	8.4	5	4.0	4	3.2
OTHER	2	.3	2	.3	9	.3	3	.1	3	.4	2	.3	2	.4					1	.8
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ELEMENTARY	1	.7	1	.7			1	.3	3	1.5		
JUNIOR HIGH	40	26.7	37	24.7	50	12.5	**101	25.3	24	12.0	25	12.5
SENIOR HIGH	54	36.0	63	42.0	237	59.3	**183	45.8	134	67.0	119	59.5
JUNIOR COLLEGE					2	.5						
COLLEGE					2	.5	1	.3	2	1.0	1	.5
JUNIOR HIGH & SR HIGH	32	21.3	33	22.0	81	20.3	76	19.0	25	12.5	* 40	20.0
HIGH SCHOOL & JR COLLEGE			1	.7	5	1.3	2	.5	2	1.0	1	.5
ELEMENTARY & JR. HIGH	7	4.7	9	6.0	2	.5	6	1.5	1	.5	1	.5
ELEM & JR HIGH & SR HIGH	16	10.7	* 6	4.0	20	5.0	30	7.5	8	4.0	13	6.5
OTHER					1	.3			1	.5		
TOTALS	150		150		400		400		200		200	

Table A-73 (continued)

TYPE OF SCHOOL WHERE APPLICANT TEACHES

	COLLEGE L				COLLEGE M				COLLEGE N				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
ELEMENTARY					1	.4			2	.3	3	.5	1	.2	1	.2	1	.8		
JUNIOR HIGH													59	14.5**	92	21.6	15	12.6	19	19.0
SENIOR HIGH	1	.8	1	.8	3	1.1	9	3.3			6	1.0	248	61.1**	200	47.1	77	64.7 *	48	48.0
JUNIOR COLLEGE	57	45.6	45	36.0	135	49.1	117	42.5	99	16.5	200	33.3			2	.5				
COLLEGE	62	49.6	79	63.2	125	45.5	143	52.0	489	81.5	381	63.5	1	.2	1	.2				
JUNIOR HIGH & SR HIGH													65	16.0	85	20.0	14	11.8	21	21.0
HIGH SCHOOL & JR COLLEGE	1	.8			7	2.5	4	1.5	5	.8	1	.2	3	.7	2	.5			1	1.0
ELEMENTARY & JR. HIGH											1	.2			6	1.4	4	3.4	3	3.0
ELEM & JR HIGH & SR HIGH													27	6.7	36	8.5	8	6.7	8	8.0
OTHER	4	3.2			4	1.5	2	.7	5	.8	8	1.3	2	.5						
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-74

TOTAL ENROLLMENT WHERE APPLICANT TEACHES

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	45	5.6	34	4.3	121	4.0	99	3.3	37	4.6	30	3.8	17	3.2	15	2.9	2	1.6	4	3.2
1-49	5	.6	12	1.5	8	.3	18	.6	4	.5	5	.6	1	.2	6	1.1				
50-99	5	.6	14	1.8	39	1.3	66	2.2	5	.6	22	2.8	7	1.3	8	1.5	1	.8	1	.8
100-299	116	14.5	126	15.8	380	12.7	375	12.5	105	13.1	108	13.5	50	9.5	63	12.0	10	8.0	7	5.6
300-499	200	25.0	191	23.9	315	10.5*	374	12.5	97	12.1	105	13.1	54	10.3	65	12.4	8	6.4	17	13.6
500-999	299	37.4	316	39.5	853	28.4	910	30.3	270	33.8	266	33.3	137	26.1	169	30.3	29	23.2 *	42	33.6
1000-2499	101	12.6	96	12.0	1086	36.2*	1004	33.5	249	31.1	238	29.8	203	38.7	173	33.0	70	56.0 **	43	34.4
2500-4999	14	1.8	5	.6	179	6.0	142	4.7	32	4.0	24	3.0	49	9.3	33	6.3	4	3.2	7	5.6
5000 AND OVER	15	1.9	6	.8	19	.6	12	.4	1	.1	2	.3	7	1.3	3	.6	1	.8	4	3.2
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	5	3.3	2	1.3	14	3.5	14	3.5	6	3.0	8	4.0
1-49	2	1.3	2	1.3			1	.3			1	.5
50-99	6	4.0	3	2.0	7	1.8	6	1.5	2	1.0	5	2.5
100-299	30	20.0 *	17	11.3	61	15.3	47	11.8	36	18.0	23	11.5
300-499	24	16.0	19	12.7	40	10.0	57	14.3	13	6.5	23	11.5
500-999	35	23.3 *	51	34.0	108	27.0	122	30.5	57	28.5	55	27.5
1000-2499	43	28.7	45	30.0	143	35.8	132	33.0	71	35.5	74	37.0
2500-4999	5	3.3	9	6.0	25	6.3	21	5.3	12	6.0	11	5.5
5000 AND OVER			2	1.3	2	.5			3	1.5		
TOTALS	150		150		400		400		200		200	

Table A-74 (continued)

TOTAL ENROLLMENT WHERE APPLICANT TEACHES

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ENTRY	8	6.4	11	8.8	15	5.5	14	5.1	35	5.8	25	4.2	13	3.2	14	3.3	4	3.4	1	1.0
1-49							1	.4			2	.3	1	.2	6	1.4				
50-99					2	.7	1	.4	4	.7	4	.7	6	1.5	5	1.2	1	.8	3	3.0
100-299	3	2.4	5	4.0	12	4.4	19	6.9	15	2.5	28	4.7	36	8.9	53	12.5	14	11.8	10	10.0
300-499	19	15.2	11	8.8	38	13.8	30	10.9	36	6.0	63	10.5	44	10.8	50	11.8	10	8.4	15	15.0
500-999	15	12.0	26	20.8	79	28.7 *	56	20.4	127	21.2	128	21.3	106	26.1	126	29.6	31	26.1	33	33.0
1000-2499	28	22.4	30	24.0	54	19.6	71	25.8	137	22.8	159	26.5	155	38.2	144	33.9	48	40.3	29	29.0
2500-4999	22	17.6	15	12.0	43	15.6	54	19.6	127	21.2	107	17.8	39	9.6	26	6.1	10	8.4	7	7.0
5000 AND OVER	30	24.0	27	21.6	32	11.6	29	10.5	119	19.8	84	14.0	6	1.5	1	.2	1	.8	2	2.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-75

CHIEF TEACHING EMPHASIS

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO SUBJECT DOMINATING	2	.3			10	.3	15	.5	2	.3	4	.5	2	.4	1	.2	1	.8	1	.8
BIOLOGY	1	.1			555	18.5	**416	13.9	117	14.6	* 86	10.8	120	22.9	** 76	14.5	51	40.8	37	29.6
CHEMISTRY					349	11.6	**236	7.9	61	7.6	* 36	4.5	66	12.6	54	10.3	20	16.0	11	8.8
EARTH SCIENCE	1	.1			63	2.1	46	1.5	36	4.5	16	2.0	9	1.7	6	1.1	1	.8	1	.8
GENERAL SCIENCE	61	7.6	44	5.5	532	17.7	582	19.4	257	32.1	222	27.8	45	8.6	** 78	14.9	4	3.2	16	12.8
MATHEMATICS	58	7.3	57	7.1	1214	40.5	**1330	44.3	241	30.1	276	34.5	225	42.9	241	45.9	42	33.6	47	37.6
PHYSICS					124	4.1	82	2.7	15	1.9	15	1.9	27	5.1	23	4.4	5	4.0	2	1.6
SOCIAL SCIENCE	1	.1			12	.4	9	.3	10	1.3	7	.9	1	.2	1	.2				
NON-SCIENCE	470	58.8	**571	71.4	106	3.5	**240	8.0	52	6.5	126	15.8	16	3.0	32	6.1	1	.8	4	3.2
ADMINISTRATE OR SUPERVISE	206	25.8	**128	16.0	35	1.2	44	1.5	9	1.1	12	1.5	14	2.7	13	2.5			6	4.8
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO SUBJECT DOMINATING					2	.5					3	1.5
BIOLOGY	20	13.3	20	13.3	69	17.3	** 45	11.3	32	16.0	34	17.0
CHEMISTRY	9	6.0	11	7.3	78	19.5	* 46	11.5	13	6.5	16	8.0
EARTH SCIENCE	1	.7	7	4.7	5	1.3	3	.8	2	1.0	1	.5
GENERAL SCIENCE	52	34.7	* 39	26.0	42	10.5	** 72	18.0	12	6.0	10	5.0
MATHEMATICS	53	35.3	48	32.0	171	42.8	187	46.8	129	64.5	125	62.5
PHYSICS	7	4.7	7	4.7	20	5.0	18	4.5	11	5.5	4	2.0
SOCIAL SCIENCE												
NON-SCIENCE	7	4.7	18	12.0	8	2.0	25	6.3	1	.5	6	3.0
ADMINISTRATE OR SUPERVISE	1	.7			5	1.3	4	1.0			1	.5
TOTALS	150		150		400		400		200		200	

Table A-75 (continued)

CHIEF TEACHING EMPHASIS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO SUBJECT DOMINATING	2	1.6	1	.8	6	2.2	1	.4	4	.7	6	1.0	2	.5	1	.2				
BIOLOGY			13	10.4	1	.4			109	18.2	120	20.0	90	22.2 **	56	13.2	30	25.2	20	20.0
CHEMISTRY	10	8.0	2	1.6	62	22.5 **	31	11.3	139	23.2 **	88	14.7	56	13.8	45	10.6	10	8.4	9	9.0
EARTH SCIENCE			1	.8			2	.7	7	1.2	11	1.8	9	2.2	5	1.2			1	1.0
GENERAL SCIENCE					1	.4	4	1.5	10	1.7	12	2.0	36	8.9 **	66	15.5	9	7.6	12	12.0
MATHEMATICS	12	9.6	10	8.0	103	37.5	130	47.3	112	18.7 **	187	31.2	165	40.6	190	44.7	60	50.4	51	51.0
PHYSICS	58	46.4 **	35	28.0	70	25.5	52	18.9	160	26.7 **	108	18.0	25	6.2	22	5.2	2	1.7	1	1.0
SOCIAL SCIENCE	20	16.0 *	35	28.0			32	11.6	29	4.8	28	4.7	1	.2	1	.2				
NON-SCIENCE	21	16.8	28	22.4	31	11.3	21	7.6	29	4.8	37	6.2	9	2.2	27	6.4	7	5.9	5	5.0
ADMINISTRATE OR SUPERVISE	2	1.6			1	.4	2	.7	1	.2	3	.5	13	3.2	12	2.8	1	.8	1	1.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

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TABLE A-76

SECOND TEACHING EMPHASIS

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO OTHER SUBJECTS	198	24.8	131	16.4	1474	49.1	1447	48.2	353	44.1	324	40.5	279	53.1	274	52.2	85	68.0	62	49.6
BIOLOGY			2	.3	185	6.2	210	7.0	58	7.3	58	7.3	32	6.1	34	6.5	3	2.4	13	10.4
CHEMISTRY					200	6.7	165	5.5	39	4.9	37	4.6	46	8.8	** 23	4.4	6	4.8	8	6.4
EARTH SCIENCE	1	.1			58	1.9	56	1.9	22	2.8	26	3.3	10	1.9	12	2.3	1	.8	1	.8
GENERAL SCIENCE	76	9.5	57	7.1	370	12.3	423	14.1	120	15.0	126	15.8	51	9.7	* 76	14.5	17	13.6	13	10.4
MATHEMATICS	452	56.5	557	69.6	210	7.0	**249	8.3	67	8.4	98	12.3	22	4.2	* 41	7.8	6	4.8	6	4.8
PHYSICS					196	6.5	141	4.7	42	5.3	28	3.6	34	6.5	25	4.8	2	1.6	9	7.2
SOCIAL SCIENCE			1	.1	10	.3	8	.3	7	.9	6	.8	1	.2						
NON-SCIENCE	43	5.4	46	5.8	246	8.2	261	8.7	80	10.0	84	10.5	34	6.5	38	7.2	5	4.0	11	8.8
ADMINISTRATE OR SUPERVISE	30	3.8	6	.8	51	1.7	40	1.3	12	1.5	13	1.6	16	3.0	2	.4			2	1.6
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO OTHER SUBJECTS	56	37.3	54	36.0	188	47.0	193	48.3	110	55.0	112	56.0
BIOLOGY	11	7.3	17	11.3	19	4.8	29	7.3	12	6.0	7	3.5
CHEMISTRY	17	11.3	10	6.7	37	9.3	33	8.3	19	9.5	7	3.5
EARTH SCIENCE	5	3.3	5	3.3	5	1.3	5	1.3			2	1.0
GENERAL SCIENCE	14	9.3	* 27	18.0	58	14.5	53	13.3	17	8.5	23	11.5
MATHEMATICS	16	10.7	12	8.0	35	8.8	31	7.8	5	2.5	14	7.0
PHYSICS	4	2.7	11	7.3	35	8.8	22	5.5	16	8.0	8	4.0
SOCIAL SCIENCE												
NON-SCIENCE	24	16.0	14	9.3	17	4.3	27	6.8	17	8.5	27	13.5
ADMINISTRATE OR SUPERVISE	3	2.0			6	1.5	7	1.8	4	2.0		
TOTALS	150		150		400		400		200		200	

Table A-76 (continued)

SECOND TEACHING EMPHASIS

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO OTHER SUBJECTS	74	59.2	95	76.0	214	77.8	196	71.3	509	84.8	475	79.2	218	53.7	216	50.8	61	51.3	58	58.0
BIOLOGY			2	1.6			2	.7	5	.8	14	2.3	26	6.4	28	6.6	6	5.0	6	6.0
CHEMISTRY	5	4.0			5	1.8	5	1.8	6	1.0	5	.8	37	9.1	21	4.9	9	7.6	2	2.0
EARTH SCIENCE	1	.8	1	.8	2	.7	1	.4	4	.7	4	.7	9	2.2	9	2.1	1	.8	3	3.0
GENERAL SCIENCE	3	2.4	1	.8	8	2.9	11	4.0	27	4.5	26	4.3	44	10.8	64	15.1	7	5.9	12	12.0
MATHEMATICS	22	17.6	6	4.8	18	6.5	21	7.6	15	2.5	22	3.7	12	3.0	34	8.0	10	8.4	7	7.0
PHYSICS	12	9.6	3	2.4	14	5.1	10	3.6	17	2.8	31	5.2	31	7.6	21	4.9	3	2.5	4	4.0
SOCIAL SCIENCE	2	1.6	8	6.4			5	1.8			5	.8	1	.2						
NON-SCIENCE	5	4.0	7	5.6	9	3.3	18	6.5	8	1.3	12	2.0	17	4.2	30	7.1	17	14.3	8	8.0
ADMINISTRATE OR SUPERVISE	1	.8	2	1.6	5	1.8	6	2.2	9	1.5	6	1.0	11	2.7	2	.5	5	4.2		
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-77

PREVIOUS ATTENDANCE NSF SUMMER INST

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO PREVIOUS ATTENDANCE	647	80.9	800	100	1574	52.5	3000	100	582	72.8	800	100	310	59.0	525	100	62	49.6	125	100
ONE PREVIOUS SUMMER INST	125	15.6			785	26.2			155	19.4			130	24.8			39	31.2		
TWO	26	3.3			397	13.2			51	6.4			57	10.9			13	10.4		
THREE	1	.1			192	6.4			11	1.4			25	4.8			10	8.0		
FOUR	1	.1			39	1.3			1	.1			3	.6			1	.8		
FIVE OR MORE					13	.4														
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO PREVIOUS ATTENDANCE	60	40.0	150	100	116	29.0	400	100	51	25.5	200	100
ONE PREVIOUS SUMMER INST	47	31.3			129	32.3			50	25.0		
TWO	26	17.3			82	20.5			52	26.0		
THREE	17	11.3			52	13.0			31	15.5		
FOUR					17	4.3			12	6.0		
FIVE OR MORE					4	1.0			4	2.0		
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO PREVIOUS ATTENDANCE	76	60.8	125	100	142	51.6	275	100	358	59.7	600	100	229	56.4	425	100	81	68.1	100	100
ONE PREVIOUS SUMMER INST	23	18.4			82	29.8			144	24.0			104	25.6			26	21.8		
TWO	16	12.8			33	12.0			54	9.0			51	12.6			6	5.0		
THREE	7	5.6			12	4.4			35	5.8			19	4.7			6	5.0		
FOUR	3	2.4			4	1.5			8	1.3			3	.7						
FIVE OR MORE					2	.7			1	.2										
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-78

PREVIOUS ATTENDANCE ACADEMIC YEAR INST.

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ACADEMIC YR INSTITUTES	789	98.6	800	100	2959	98.6	3000	100	792	99.0	800	100	516	98.3	525	100	119	95.2	125	100
ONE	10	1.3			41	1.4			8	1.0			9	1.7			6	4.8		
TWO	1	.1																		
THREE																				
FOUR																				
FIVE OR MORE																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ACADEMIC YR INSTITUTES	150	100	150	100	395	98.8	400	100	193	96.5	200	100
ONE					5	1.3			7	3.5		
TWO												
THREE												
FOUR												
FIVE OR MORE												
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO ACADEMIC YR INSTITUTES	120	96.0	125	100	258	93.8	275	100	568	94.7	600	100	397	97.8	425	100	119	100	100	100
ONE	5	4.0			17	6.2			32	5.3			9	2.2						
TWO																				
THREE																				
FOUR																				
FIVE OR MORE																				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-79

PREVIOUS ATTENDANCE IN-SERVICE INST

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO IN-SERVICE INSTITUTES	764	95.5	800	100	2336	77.9	3000	100	660	82.5	800	100	427	81.3	525	100	89	71.2	125	100
ONE	33	4.1			479	16.0			102	12.8			71	13.5			28	22.4		
TWO	3	.4			141	4.7			30	3.8			20	3.8			6	4.8		
THREE					31	1.0			6	.8			4	.8			1	.8		
FOUR					12	.4			2	.3			3	.6			1	.8		
FIVE OR MORE					1															
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO IN-SERVICE INSTITUTES	119	79.3	150	100	291	72.8	400	100	146	73.0	200	100
ONE	27	18.0			72	18.0			42	21.0		
TWO	4	2.7			31	7.8			9	4.5		
THREE					6	1.5			2	1.0		
FOUR												
FIVE OR MORE									1	.5		
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO IN-SERVICE INSTITUTES	124	99.2	125	100	269	97.8	275	100	588	98.0	600	100	333	82.0	425	100	94	79.0	100	100
ONE	1	.8			6	2.2			9	1.5			51	12.6			20	16.8		
TWO									2	.3			17	4.2			3	2.5		
THREE									1	.2			4	1.0						
FOUR													1	.2			2	1.7		
FIVE OR MORE																				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-80

PREVIOUS NSF RESEARCH PARTICIPATION

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF RESEARCH PARTIC	798	99.8	800	100	2979	99.3	3000	100	799	99.9	800	100	518	98.7	525	100	123	98.4	125	100
ONE	2	.3			17	.6			1	.1			6	1.1						
TWO					4	.1							1	.2			2	1.6		
THREE																				
FOUR																				
FIVE OR MORE																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF RESEARCH PARTIC	149	99.3	150	100	397	99.3	400	100	199	99.5	200	100
ONE	1	.7			3	.8			1	.5		
TWO												
THREE												
FOUR												
FIVE OR MORE												
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF RESEARCH PARTIC	124	99.2	125	100	268	97.5	275	100	559	93.2	600	100	399	98.3	425	100	119	100	100	100
ONE	1	.8			5	1.8			33	5.5			6	1.5						
TWO					1	.4			8	1.3			1	.2						
THREE					1	.4														
FOUR																				
FIVE OR MORE																				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-81

PREVIOUS NSF FELLOWSHIPS

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF FELLOWSHIPS	795	99.4	800	100	2973	99.1	3000	100	796	99.5	800	100	520	99.0	525	100	124	99.2	125	100
ONE YEAR	5	.6			20	.7			4	.5			5	1.0			1	.8		
TWO YEARS					4	.1														
THREE YEARS					2	.1														
FOUR YEARS					1															
FIVE OR MCRE YEARS																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF FELLOWSHIPS	149	99.3	150	100	390	97.5	400	100	199	99.5	200	100
ONE YEAR	1	.7			6	1.5			1	.5		
TWO YEARS					2	.5						
THREE YEARS					1	.3						
FOUR YEARS					1	.3						
FIVE OR MCRE YEARS												
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF FELLOWSHIPS	120	96.0	125	100	270	98.2	275	100	576	96.0	600	100	402	99.0	425	100	118	99.2	100	100
ONE YEAR	4	3.2			5	1.8			18	3.0			4	1.0			1	.8		
TWO YEARS									3	.5										
THREE YEARS	1	.8							3	.5										
FOUR YEARS																				
FIVE OR MORE YEARS																				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-82

TOTAL NSF INSTITUTES,RSCH PARTIC,FELLOWS

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF PARTIC.-ANY TYPE	609	76.1	800	100	1286	42.9	3000	100	492	61.5	800	100	259	49.3	525	100	43	34.4	125	100
ONE	157	19.6			777	25.9			187	23.4			125	23.8			43	34.4		
TWO	24	3.0			497	16.6			79	9.9			80	15.2			21	16.8		
THREE	7	.9			272	9.1			25	3.1			48	9.1			9	7.2		
FOUR	1	.1			119	4.0			13	1.6			13	2.5			6	4.8		
FIVE OR MCRE	2	.3			49	1.6			4	.5							3	2.4		
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF PARTIC.-ANY TYPE	50	33.3	150	100	84	21.0	400	100	40	20.0	200	100
ONE	42	28.0			106	26.5			44	22.0		
TWO	32	21.3			102	25.5			50	25.0		
THREE	19	12.7			59	14.8			37	18.5		
FOUR	7	4.7			34	8.5			22	11.0		
FIVE OR MCRE					15	3.8			7	3.5		
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF PARTIC.-ANY TYPE	73	58.4	125	100	128	46.5	275	100	309	51.5	600	100	191	47.0	425	100	68	57.1	100	100
ONE	22	17.6			85	30.9			151	25.2			103	25.4			22	18.5		
TWO	14	11.2			38	13.8			73	12.2			62	15.3			18	15.1		
THREE	11	8.8			15	5.5			46	7.7			40	9.9			8	6.7		
FOUR	4	3.2			6	2.2			15	2.5			10	2.5			3	2.5		
FIVE OR MORE	1	.8			3	1.1			6	1.0										
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-83

NUMBER OF NON-NSF INSTITUTES ATTENDED

		ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
		FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NON-NSF INSTITUTES	NONE	693	86.6	800	100	2840	94.7	3000	100	760	95.0	800	100	478	91.0	525	100	121	96.8	125	100
ONE		74	9.3			112	3.7			27	3.4			34	6.5			4	3.2		
TWO		23	2.9			38	1.3			10	1.3			11	2.1						
THREE		7	.9			8	.3			2	.3			1	.2						
FOUR		2	.3																		
FIVE OR MORE		1	.1			2	.1			1	.1			1	.2						
	TOTALS	800		800		3000		3000		800		800		525		525		125		125	

		SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
		FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NON-NSF INSTITUTES	NONE	145	96.7	150	100	380	95.0	400	100	198	99.0	200	100
ONE		4	2.7			12	3.0			1	.5		
TWO		1	.7			6	1.5			1	.5		
THREE						2	.5						
FOUR													
FIVE OR MORE													
	TOTALS	150		150		400		400		200		200	

		COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
		FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NON-NSF INSTITUTES	NONE	115	92.0	125	100	260	94.5	275	100	547	91.2	600	100	372	91.6	425	100	106	89.1	100	100
ONE		6	4.8			12	4.4			41	6.8			25	6.2			9	7.5		
TWO		3	2.4			3	1.1			11	1.8			7	1.7			4	3.4		
THREE		1	.8							1	.2			1	.2						
FOUR																					
FIVE OR MORE														1	.2						
	TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-34

UNIVERSITIES ATTENDED SUMMER INSTITUTES

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF SUMMER INSTITUTES	647	80.9	800	100	1574	52.5	3000	100	582	72.8	800	100	310	59.0	525	100	62	49.6	125	100
ONE UNIVERSITY FOR NSF SI	135	16.9			1051	35.0			171	21.4			151	28.8			45	36.0		
TWO	16	2.0			305	10.2			42	5.3			44	8.4			15	12.0		
THREE	2	.3			60	2.0			5	.6			18	3.4			3	2.4		
FOUR					7	.2							2	.4						
FIVE OR MCRE					3	.1														
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF SUMMER INSTITUTES	60	40.0	150	100	116	29.0	400	100	51	25.5	200	100
ONE UNIVERSITY FOR NSF SI	67	44.6			210	52.5			94	47.0		
TWO	22	14.7			59	14.8			45	22.5		
THREE	1	.7			11	2.8			7	3.5		
FOUR					4	1.0			1	.5		
FIVE OR MCRE									2	1.0		
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF SUMMER INSTITUTES	76	60.8	125	100	142	51.6	275	100	358	59.7	600	100	229	56.4	425	100	81	68.1	100	100
ONE UNIVERSITY FOR NSF SI	26	20.8			93	33.9			159	26.5			122	30.0			29	24.4		
TWO	18	14.4			33	12.0			56	9.3			40	9.9			4	3.4		
THREE	3	2.4			6	2.2			24	4.0			13	3.2			5	4.2		
FOUR	2	1.6							3	.5			2	.5						
FIVE OR MORE					1	.4														
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-85

UNIVERSITIES ATTENDED ACADEMIC YR. INST

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF ACAD YR INSTITUTES	789	98.6	800	100	2959	98.6	3000	100	792	99.0	800	100	516	98.3	525	100	119	95.2	125	100
ONE UNIVERSITY FOR AY	10	1.3			41	1.4			8	1.0			9	1.7			6	4.8		
TWO	1	.1																		
THREE																				
FOUR																				
FIVE OR MORE																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF ACAD YR INSTITUTES	150	100	150	100	395	98.8	400	100	193	96.5	200	100
ONE UNIVERSITY FOR AY					5	1.3			7	3.5		
TWO												
THREE												
FOUR												
FIVE OR MORE												
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF ACAD YR INSTITUTES	120	96.0	125	100	258	93.8	275	100	568	94.7	600	100	397	97.8	425	100	119	100	100	100
ONE UNIVERSITY FOR AY	5	4.0			17	6.2			32	5.3			9	2.2						
TWO																				
THREE																				
FOUR																				
FIVE OR MORE																				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-86

UNIVERSITIES ATTENDED IN-SERVICE INST.

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF IN-SERV.INSTITUTES	764	95.5	800	100	2336	77.9	3000	100	660	82.5	800	100	427	81.3	525	100	89	71.2	125	100
ONE UNIVERSITY FOR IN-SER	36	4.5			604	20.1			133	16.6			90	17.1			33	26.4		
TWO					51	1.7			7	.9			7	1.3			3	2.4		
THREE					8	.3							1	.2						
FOUR					1															
FIVE OR MCRE																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF IN-SERV.INSTITUTES	119	79.3	150	100	291	72.8	400	100	146	73.0	200	100
ONE UNIVERSITY FOR IN-SER	31	20.7			94	23.5			50	25.0		
TWO					13	3.3			4	2.0		
THREE					2	.5						
FOUR												
FIVE OR MCRE												
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF IN-S[illegible]V.INSTITUTES	124	99.2	125	100	269	97.8	275	100	588	98.0	600	100	333	82.0	425	100	94	79.0	100	100
ONE UNIVERSITY FOR IN-SER	1	.8			6	2.2			12	2.0			66	16.3			24	20.2		
TWO													6	1.5			1	.8		
THREE													1	.2						
FOUR																				
FIVE OR MORE																				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-87

UNIVERSITIES ATTENDED RESEARCH PARTIC.

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF RESEARCH PARTICIP.	798	99.8	800	100	2979	99.3	3000	100	799	99.9	800	100	518	98.7	525	100	123	98.4	125	100
ONE UNIVERSITY FOR RSCH	2	.3			19	.6			1	.1			7	1.3			2	1.6		
TWO					2	.1														
THREE																				
FOUR																				
FIVE OR MCRE																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF RESEARCH PARTICIP.	149	99.3	150	100	397	99.3	400	100	199	99.5	200	100
ONE UNIVERSITY FOR RSCH	1	.7			3	.8			1	.5		
TWO												
THREE												
FOUR												
FIVE OR MCRE												
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF RESEARCH PARTICIP.	124	99.2	125	100	268	97.5	275	100	559	93.2	600	100	399	98.3	425	100	119	100	100	100
ONE UNIVERSITY FOR RSCH	1	.8			7	2.5			37	6.2			7	1.7						
TWO									3	.5										
THREE									1	.2										
FOUR																				
FIVE OR MORE																				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-88

UNIVERSITIES ATTENDED NSF FELLOWSHIPS

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF FELLOWSHIPS	795	99.4	800	100	2973	99.1	3000	100	796	99.5	800	100	520	99.0	525	100	124	99.2	125	100
ONE UNIV FOR FELLOWSHIP	5	.6			24	.8			4	.5			5	1.0			1	.8		
TWO					3	.1														
THREE																				
FOUR																				
FIVE OR MCRE																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF FELLOWSHIPS	149	99.3	150	100	390	97.5	400	100	199	99.5	200	100
ONE UNIV FOR FELLOWSHIP	1	.7			10	2.5			1	.5		
TWO												
THREE												
FOUR												
FIVE OR MCRE												
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF FELLOWSHIPS	120	96.0	125	100	270	98.2	275	100	576	96.0	600	100	402	99.0	425	100	118	99.2	100	100
ONE UNIV FOR FELLOWSHIP	4	3.2			5	1.8			22	3.7			4	1.0			1	.8		
TWO	1	.8																		
THREE									2	.3										
FOUR																				
FIVE OR MORE																				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-89

TOTAL UNIVERSITIES ATTENDED NSF STUDIES

	ELEMENTARY				SECONDARY		COMBINED		SECONDARY		UNITARY L		SECONDARY		UNITARY M		SECONDARY		UNITARY H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF STUDIES ATTENDED	609	76.1	800	100	1286	42.9	3000	100	492	61.5	800	100	259	49.3	525	100	43	34.4	125	100
ONE UNIVERSITY - ANY NSF	169	21.1			1100	36.7			232	29.0			165	31.4			52	41.6		
TWO	17	2.1			458	15.3			65	8.1			65	12.4			21	16.8		
THREE	5	.6			136	4.5			10	1.3			33	6.3			8	6.4		
FOUR					20	.7			1	.1			3	.6			1	.8		
FIVE OR MCRE																				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY		SEQUEN. L		SECONDARY		SEQUEN. M		SECONDARY		SEQUEN. H	
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF STUDIES ATTENDED	50	33.3	150	100	84	21.0	400	100	40	20.0	200	100
ONE UNIVERSITY - ANY NSF	64	42.7			192	48.0			78	39.0		
TWO	31	20.7			94	23.5			56	28.0		
THREE	5	3.3			26	6.5			19	9.5		
FOUR					4	1.0			6	3.0		
FIVE OR MCRE									1	.5		
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO NSF STUDIES ATTENDED	73	58.4	125	100	128	46.5	275	100	309	51.5	600	100	191	47.0	425	100	68	57.1	100	100
ONE UNIVERSITY - ANY NSF	25	20.0			99	36.0			178	29.7			135	33.3			30	25.2		
TWO	18	14.4			36	13.1			70	11.7			51	12.6			14	11.8		
THREE	8	6.4			11	4.0			39	6.5			27	6.7			6	5.0		
FOUR	1	.8			1	.4			4	.7			2	.5			1	.8		
FIVE OR MORE																				
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-90

CONSECUTIVE NSF ATTENDANCES AT ONE UNIV.

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1 OR NO UNIV FOR NSF	784	98.0	800	100	2494	83.1	3000	100	745	93.1	800	100	468	89.1	525	100	109	87.2	125	100
2 CONSEC PARTIC SAME UNIV	10	1.3			342	11.4			36	4.5			45	8.6			12	9.6		
3 - SAME UNIVERSITY	4	.5			121	4.0			15	1.9			10	1.9			3	2.4		
4 - SAME UNIVERSITY	1	.1			32	1.1			4	.5			1	.2						
5 OR MORE SAME UNIVERSITY	1	.1			11	.4							1	.2			1	.8		
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1 OR NO UNIV FOR NSF	115	76.7	150	100	273	68.3	400	100	126	63.0	200	100
2 CONSEC PARTIC SAME UNIV	25	16.7			74	18.5			52	26.0		
3 - SAME UNIVERSITY	6	4.0			34	8.5			21	10.5		
4 - SAME UNIVERSITY	4	2.7			12	3.0						
5 OR MORE SAME UNIVERSITY					7	1.8			1	.5		
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
1 OR NO UNIV FOR NSF	117	93.6	125	100	257	93.5	275	100	551	91.8	600	100	358	88.2	425	100	110	92.4	100	100
2 CONSEC PARTIC SAME UNIV	8	6.4			10	3.6			34	5.7			37	9.1			8	6.7		
3 - SAME UNIVERSITY					7	2.5			13	2.2			9	2.2			1	.8		
4 - SAME UNIVERSITY					1	.4			2	.3			1	.2						
5 OR MORE SAME UNIVERSITY													1	.2						
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-91

PROFESSIONAL JOURNALS READ REGULARLY

	ELEMENTARY				SECONDARY	COMBINED			SECONDARY	UNITARY L			SECONDARY	UNITARY M			SECONDARY	UNITARY H		
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	25	3.1	43	5.4	98	3.3	140	4.7	33	4.1	43	5.4	12	2.3	24	4.6	5	4.0	2	1.6
EDUCATION JOURNALS ONLY	273	34.1	289	36.1	275	9.2	326	10.9	104	13.0	111	13.9	45	8.6	55	10.5	3	2.4	10	8.0
SPECIAL SCIENCE ONLY	1	.1			11	.4	34	1.1	2	.3	5	.6	3	.6	5	1.0			1	.8
SCIENCE-EDUCATION ONLY	12	1.5	12	1.5	174	5.8	168	5.6	23	2.9	33	4.1	27	5.1	34	6.5	6	4.8	9	7.2
GENERAL SCIENCE ONLY	14	1.8	30	3.8	240	8.0	292	9.7	90	11.3	99	12.4	39	7.4	49	9.3	6	4.8	11	8.8
EDUC & GEN SCI JOURNALS	108	13.5	* 142	17.8	335	11.2	394	13.1	146	18.3	134	16.8	33	6.3	** 58	11.0	11	8.8	15	12.0
EDUC & SPEC SCI JOURNALS	5	.6	8	1.0	59	2.0	55	1.8	15	1.9	10	1.3	6	1.1	7	1.3	2	1.6	2	1.6
EDUC & SCIENCE-EDUCATION	204	25.5	**159	19.9	451	15.0	446	14.9	100	12.5	93	11.6	104	19.8	* 77	14.7	15	12.0	19	15.2
EDUC, GEN SCI ,& SPEC.SCI	11	1.4	7	.9	95	3.2	90	3.0	30	3.8	29	3.6	22	4.2	8	1.5	2	1.6	3	2.4
EDUC, GEN SCI, & SCI-EDUC.	96	12.0	81	10.1	387	12.9	355	11.8	96	12.0	85	10.6	59	11.2	75	14.3	24	19.2	22	17.6
EDUC, SPEC.SCI, & SCI-EDUC	7	.9	5	.6	62	2.1	57	1.9	6	.8	12	1.5	12	2.3	8	1.5	4	3.2	3	2.4
EDUC,SP.SC,GEN SC,&SCI-ED	12	1.5	4	.5	162	5.4	101	3.4	24	3.0	20	2.5	35	6.7	17	3.2	13	10.4	4	3.2
GENERAL SCI.& SPECIAL SCI	3	.4	3	.4	94	3.1	86	2.9	19	2.4	25	3.1	18	3.4	12	2.3	4	3.2	4	3.2
GENERAL SCI.& SCI-EDUC	24	3.0	13	1.6	369	12.3	**293	9.8	80	10.0	72	9.0	75	14.3	64	12.2	14	11.2	10	8.0
GEN SCI,SPEC SCI, & SCI-ED	4	.5	2	.3	152	5.1	109	3.6	24	3.0	19	2.4	30	5.7	20	3.8	13	10.4	7	5.6
SPECIAL SCI & SCI-ED	1	.1	2	.3	36	1.2	54	1.8	8	1.0	10	1.3	5	1.0	12	2.3	3	2.4	3	2.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY	SEQUEN. L			SECONDARY	SEQUEN. M			SECONDARY	SEQUEN. H		
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	4	2.7	2	1.3	10	2.5	22	5.5	4	2.0	10	5.0
EDUCATION JOURNALS ONLY	9	6.0	10	6.7	24	6.0	34	8.5	13	6.5	13	6.5
SPECIAL SCIENCE ONLY			2	1.3	2	.5	6	1.5	3	1.5	2	1.0
SCIENCE-EDUCATION ONLY	7	4.7	8	5.3	27	6.8	28	7.0	26	13.0	15	7.5
GENERAL SCIENCE ONLY	15	10.0	13	8.7	29	7.3	32	8.0	4	2.0	9	4.5
EDUC & GEN SCI JOURNALS	21	14.0	21	14.0	27	6.8	41	10.3	15	7.5	18	9.0
EDUC & SPEC SCI JOURNALS	1	.7	4	2.7	12	3.0	7	1.8	6	3.0	6	3.0
EDUC & SCIENCE-EDUCATION	24	16.0	23	15.3	50	12.5	65	16.3	44	22.0	48	24.0
EDUC, GEN SCI ,& SPEC.SCI	6	4.0	7	4.7	11	2.8	15	3.8	2	1.0	3	1.5
EDUC, GEN SCI,& SCI-EDUC.	22	14.7	24	16.0	55	13.8	48	12.0	24	12.0	20	10.0
EDUC, SPEC.SCI,& SCI-EDUC	1	.7	3	2.0	13	3.3	9	2.3	6	3.0	9	4.5
EDUC,SP.SC,GEN SC,&SCI-ED	4	2.7	11	7.3	24	6.0	14	3.5	10	5.0	4	2.0
GENERAL SCI.& SPECIAL SCI	6	4.0	7	4.7	16	4.0	9	2.3	5	2.5	5	2.5
GENERAL SCI.& SCI-EDUC	22	14.7	7	4.7	68	17.0	* 48	12.0	25	12.5	26	13.0
GEN SCI,SPEC SCI,& SCI-ED	3	2.0	6	4.0	28	7.0	13	3.3	9	4.5	8	4.0
SPECIAL SCI & SCI-ED	5	3.3	2	1.3	4	1.0	9	2.3	4	2.0	4	2.0
TOTALS	150		150		400		400		200		200	

Table A-91 (continued)

PROFESSIONAL JOURNALS READ REGULARLY

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NONE	20	16.0	29	23.2	22	8.0	31	11.3	60	10.0 *	37	6.2	10	2.5	23	5.4	2	1.7	1	1.0
EDUCATION JOURNALS ONLY	4	3.2	5	4.0	18	6.5 *	24	8.7	12	2.0	23	3.8	33	8.1	44	10.4	12	10.1	11	11.0
SPECIAL SCIENCE ONLY	17	13.6	21	16.8	21	7.6	38	13.8	71	11.8**	118	19.7	3	.7	4	.9			1	1.0
SCIENCE-EDUCATION ONLY	6	4.8	6	4.8	31	11.3	37	13.5	44	7.3	31	5.2	19	4.7	28	6.6	8	6.7	6	6.0
GENERAL SCIENCE ONLY	7	5.6	18	14.4	9	3.3	5	1.8	18	3.0	28	4.7	29	7.1	43	10.1	10	8.4	6	6.0
EDUC & GEN SCI JOURNALS	2	1.6	9	7.2	5	1.8	3	1.1	7	1.2	13	2.2	29	7.1	50	11.8	4	3.4	8	8.0
EDUC & SPEC SCI JOURNALS	7	5.6	2	1.6	13	4.7	9	3.3	4	.7	19	3.2	6	1.5	7	1.6				
EDUC & SCIENCE-EDUCATION	1	.8	3	2.4	28	10.2	33	12.0	9	1.5	35	5.8	76	18.7	60	14.1	28	23.5	17	17.0
EDUC, GEN SCI ,& SPEC.SCI	1	.8	3	2.4	3	1.1	6	2.2	9	1.5	14	2.3	19	4.7	6	1.4	3	2.5	2	2.0
EDUC, GEN SCI,& SCI-EDUC.	3	2.4	1	.8	7	2.5	5	1.8	10	1.7	15	2.5	48	11.8	61	14.4	11	9.2	14	14.0
EDUC, SPEC.SCI,& SCI-EDUC	4	3.2	1	.8	14	5.1	13	4.7	10	1.7	15	2.5	8	2.0	6	1.4	4	3.4	2	2.0
EDUC,SP.SC,GEN SC,&SCI-ED	3	2.4	2	1.6	12	4.4	4	1.5	17	2.8	13	2.2	28	6.9	15	3.5	7	5.9	2	2.0
GENERAL SCI.& SPECIAL SCI	9	7.2	11	8.8	11	4.0	16	5.8	80	13.3	103	17.2	16	3.9	9	2.1	2	1.7	3	3.0
GENERAL SCI.& SCI-EDUC	3	2.4			14	5.1	9	3.3	19	3.2	25	4.2	55	13.5	43	10.1	20	16.8	21	21.0
GEN SCI,SPEC SCI,& SCI-ED	13	10.4	5	4.0	25	9.1	18	6.5	118	19.7 **	59	9.8	22	5.4	16	3.8	8	6.7	4	4.0
SPECIAL SCI & SCI-ED	25	20.0 **	9	7.2	42	15.3	24	8.7	112	18.7 **	52	8.7	5	1.2	10	2.4			2	2.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-92

PROFESSIONAL ORGANIZATIONS - TYPE

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO PROF. MEMBERSHIPS	55	6.9	**110	13.8	237	7.9	272	9.1	82	10.3	85	10.6	42	8.0	45	8.6	6	4.8	9	7.2
MEMBER OF EDUC ORGS ONLY	580	72.5	590	73.8	1124	37.5	**1413	47.1	377	47.1	391	48.9	162	30.9	**233	44.4	42	33.6	* 59	47.2
SPECIAL SCIENCE ORGS ONLY	2	.3	1	.1	29	1.0	17	.6	6	.8	2	.3	2	.4	6	1.1	1	.8		
SCIENCE-EDUC ORGS ONLY	5	.6	4	.5	212	7.1	163	5.4	29	3.6	38	4.8	47	9.0	31	5.9	7	5.6	6	4.8
GENERAL SCI ORGS ONLY	4	.5	8	1.0	25	.8	30	1.0	6	.8	12	1.5	4	.8	2	.4	1	.8	1	.8
EDUC & GEN SCI ORGS	24	3.0	24	3.0	87	2.9	92	3.1	24	3.0	35	4.4	11	2.1	12	2.3	4	3.2	5	4.0
EDUC & SPEC SCI ORGS	17	2.1	7	.9	92	3.1	103	3.4	27	3.4	27	3.4	16	3.0	14	2.7	3	2.4	2	1.6
EDUC & SCIENCE-EDUC ORGS	93	11.6	** 48	6.0	873	29.1	**691	23.0	205	25.6	* 164	20.5	173	33.0	**129	24.6	36	28.8	35	28.0
EDUC, GEN SCI, & SPEC.SCI.	2	.3			15	.5	13	.4	2	.3	2	.3	6	1.1	4	.8	2	1.6		
EDUC, GEN SCI, & SCI-EDUC.	10	1.3	3	.4	100	3.3	70	2.3	14	1.8	17	2.1	23	4.4	16	3.0	10	8.0	3	2.4
EDUC, SPEC SCI. & SCI-EDUC	4	.5	3	.4	99	3.3	68	2.3	9	1.1	11	1.4	21	4.0	13	2.5	7	5.6	5	4.0
EDUC,SP.SC,GEN.SC,&SCI-ED	1	.1			21	.7	15	.5	2	.3	3	.4	4	.8	5	1.0	3	2.4		
GENERAL SCI & SPECIAL SCI	1	.1	2	.3	7	.2	5	.2	4	.5	3	.4	1	.2	1	.2				
GENERAL SCI & SCI-EDUC	1	.1			29	1.0	26	.9	5	.6	8	1.0	4	.8	5	1.0	3	2.4		
GEN SCI,SPEC SCI,& SCI-ED					14	.5	8	.3	3	.4	1	.1	4	.8	3	.6				
SPECIAL SCI & SCI-ED	1	.1			36	1.2	14	.5	5	.6	1	.1	5	1.0	6	1.1				
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO PROF. MEMBERSHIPS	9	6.0	11	7.3	27	6.8	36	9.0	15	7.5	11	5.5
MEMBER OF EDUC ORGS ONLY	62	41.3	72	48.0	113	28.3	**179	44.8	76	38.0	* 95	47.5
SPECIAL SCIENCE ORGS ONLY			2	1.3	7	1.8	1	.3	4	2.0	1	.5
SCIENCE-EDUC ORGS ONLY	13	8.7	7	4.7	40	10.0	30	7.5	20	10.0	11	5.5
GENERAL SCI ORGS ONLY	5	3.3			4	1.0	3	.8	1	.5	2	1.0
EDUC & GEN SCI ORGS	4	2.7	5	3.3	16	4.0	10	2.5	1	.5	5	2.5
EDUC & SPEC SCI ORGS	1	.7			15	3.8	17	4.3	3	1.5	7	3.5
EDUC & SCIENCE-EDUC ORGS	41	27.3	43	28.7	132	33.0	**100	25.0	48	24.0	50	25.0
EDUC, GEN SCI,& SPEC.SCI.					1	.3	1	.3	1	.5	1	.5
EDUC, GEN SCI,& SCI-EDUC.	10	6.7	5	3.3	16	4.0	9	2.3	3	1.5	5	2.5
EDUC, SPEC SCI.& SCI-EDUC	2	1.3	2	1.3	15	3.8	7	1.8	11	5.5	6	3.0
EDUC,SP.SC,GEN.SC,&SCI-ED	1	.7	1	.7	1	.3			5	2.5	2	1.0
GENERAL SCI & SPECIAL SCI					1	.3			1	.5		
GENERAL SCI & SCI-EDUC	2	1.3	1	.7	4	1.0	3	.8			1	.5
GEN SCI,SPEC SCI,& SCI-ED			1	.7	3	.8	2	.5			1	.5
SPECIAL SCI & SCI-ED					5	1.3	2	.5	11	5.5	2	1.0
TOTALS	150		150		400		400		200		200	

Table A-92 (continued)

PROFESSIONAL ORGANIZATIONS - TYPE

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO PROF. MEMBERSHIPS	15	12.0	26	20.8	32	11.6	37	13.5	75	12.5	59	9.8	33	8.1	40	9.4	9	7.6	5	5.0
MEMBER OF EDUC ORGS ONLY	25	20.0	* 37	29.6	59	21.5	71	25.8	35	5.8	** 82	13.7	134	33.0	**202	47.5	28	23.5	31	31.0
SPECIAL SCIENCE ORGS ONLY	17	13.6	21	16.8	32	11.6	35	12.7	96	16.0	95	15.8	1	.2	3	.7	1	.8	3	3.0
SCIENCE-EDUC ORGS ONLY	10	8.0	2	1.6	22	8.0	10	3.6	24	4.0	28	4.7	27	6.7	15	3.5	20	16.8	16	16.0
GENERAL SCI ORGS ONLY			5	4.0	4	1.5	1	.4	16	2.7	21	3.5	3	.7	2	.5	1	.8		
EDUC & GEN SCI ORGS	2	1.6	3	2.4	3	1.1	7	2.5	17	2.8	30	5.0	11	2.7	11	2.6			1	1.0
EDUC & SPEC SCI ORGS	10	8.0	8	6.4	27	9.8	22	8.0	27	4.5	** 53	8.8	13	3.2	10	2.4	3	2.5	4	4.0
EDUC & SCIENCE-EDUC ORGS	11	8.8	1	.8	28	10.2	22	8.0	32	5.3	* 55	9.2	133	32.8	**101	23.8	40	33.6	28	28.0
EDUC, GEN SCI,& SPEC.SCI.	1	.8	4	3.2	7	2.5	6	2.2	38	6.3	24	4.0	4	1.0	2	.5	2	1.7	2	2.0
EDUC, GEN SCI,& SCI-EDUC.	1	.8	1	.8	6	2.2	3	1.1	9	1.5	15	2.5	18	4.4	10	2.4	5	4.2	6	6.0
EDUC, SPEC SCI.& SCI-EDUC	8	6.4	3	2.4	21	7.6	27	9.8	29	4.8	29	4.8	19	4.7	12	2.8	2	1.7	1	1.0
EDUC,SP.SC,GEN.SC,&SCI-ED	2	1.6	2	1.6	4	1.5	4	1.5	19	3.2	16	2.7	2	.5	5	1.2	2	1.7		
GENERAL SCI & SPECIAL SCI	5	4.0	4	3.2	7	2.5	8	2.9	77	12.8	** 39	6.5			1	.2	1	.8		
GENERAL SCI & SCI-EDUC	1	.8			3	1.1	3	1.1	14	2.3	9	1.5	2	.5	3	.7	2	1.7	2	2.0
GEN SCI,SPEC SCI,& SCI-ED	7	5.6	1	.8	4	1.5	4	1.5	44	7.3	** 16	2.7	3	.7	3	.7	1	.8		
SPECIAL SCI & SCI-ED	10	8.0	7	5.6	16	5.8	15	5.5	48	8.0	* 29	4.8	3	.7	5	1.2	2	1.7	1	1.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

TABLE A-93

PROFESSIONAL ORGANIZATIONS- GEOG EXTENT

	ELEMENTARY				SECONDARY COMBINED				SECONDARY UNITARY L				SECONDARY UNITARY M				SECONDARY UNITARY H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO PROF MEMBERSHIPS; UNSPEC.	55	6.9**	110	13.8	241	8.0	272	9.1	84	10.5	85	10.6	42	8.0	45	8.6	6	4.8	9	7.2
MEMBER REGIONAL ORGS ONLY	99	12.4	135	16.9	633	21.1	755	25.2	194	24.3	202	25.3	98	18.7*	136	25.9	25	20.0	29	23.2
MEMBER NATIONAL ORGS ONLY	40	5.0	35	4.4	218	7.3	180	6.0	49	6.1	53	6.6	26	5.0	31	5.9	2	1.6	4	3.2
NATIONAL & REGIONAL ORGS.	606	75.8**	520	65.0	1908	63.6**	1793	59.8	473	59.1	460	57.5	359	68.4**	313	59.6	92	73.6	83	66.4
TOTALS	800		800		3000		3000		800		800		525		525		125		125	

	SECONDARY SEQUEN. L				SECONDARY SEQUEN. M				SECONDARY SEQUEN. H			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO PROF MEMBERSHIPS	9	6.0	11	7.3	27	6.8	36	9.0	17	8.5	11	5.5
MEMBER REGIONAL ORGS ONLY	37	24.7	33	22.0	73	18.3	112	28.0	37	18.5	55	27.5
MEMBER NATIONAL ORGS ONLY	10	6.7	9	6.0	40	10.0	24	6.0	21	10.5	14	7.0
NATIONAL & REGIONAL ORGS.	94	62.7	97	64.7	260	65.0	228	57.0	125	62.5	120	60.0
TOTALS	150		150		400		400		200		200	

	COLLEGE L				COLLEGE M				COLLEGE H				MALE				FEMALE			
	ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED		ACCEPTED		REJECTED	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
NO PROF MEMBERSHIPS	15	12.0	26	20.8	33	12.0	37	13.5	78	13.0	60	10.0	33	8.1	40	9.4	9	7.6	5	5.0
MEMBER REGIONAL ORGS ONLY	9	7.2	13	10.4	42	15.3	36	13.1	26	4.3	42	7.0	80	19.7	119	28.0	18	15.1	17	17.0
MEMBER NATIONAL ORGS ONLY	56	44.8	52	41.6	80	29.1	84	30.5	256	42.7	229	38.2	16	3.9	23	5.4	10	8.4	8	8.0
NATIONAL & REGIONAL ORGS.	45	36.0	34	27.2	120	43.6	118	42.9	240	40.0	269	44.8	277	68.2**	243	57.2	82	68.9	70	70.0
TOTALS	125		125		275		275		600		600		406		425		119		100	

NSF FORM 9C-24B
DEC 1963

Budget Bureau No. 99-R176.1
Approval Expires May 15, 1966

SUMMER INSTITUTES

APPLICATION FOR PARTICIPATION IN THE SUPPLEMENTARY TRAINING PROGRAM

being supported by

THE NATIONAL SCIENCE FOUNDATION

for Teachers of Science and Mathematics

Institution to which application is made ____________________

Name of Institute Director ____________________

A complete application must include: (1) this form with *every* item filled in, (2) the Applicant Record Card which will be forwarded *by the Institute Director* to the National Science Foundation, and (3) any local forms supplied by the institution to which you apply. The foregoing must all be sent to the Director of the selected Summer Institute. They must be postmarked by February 15 to guarantee consideration of your application. Earlier applications are encouraged.

Do not have college transcripts sent at this time *unless requested by the local Institute Director.* Similarly do not have letters of recommendation sent *unless requested by the Institute Director.*

Supply a complete answer to each item, writing "NONE" where appropriate. Use an extra sheet whenever necessary, but not unless necessary. TYPE or PRINT all responses, except that page 4 may be written in script.

1. Your name: Mr. Mrs. Miss (Encircle one) (or: ________) ________ (Last) ________ (First) ________ (Middle)
2. Social Security No. ____________ 3. Date of birth ____________
4. Name of school in which you teach ____________ Your Position ____________

School address: No. and street ____________ School phone No. ____________
City, State, ZIP code ____________ Area code ____________
Type of school: ☐ College ☐ Junior College ☐ High School ☐ Junior High ☐ Elementary ☐ Other
also: ☐ Public ☐ Private
Range of grades in this school (i.e.: "9-12", "7-8", etc.) ____________ Total regular enrollment this term ____________

5. Residential address: No. and street ____________ Phone No. ____________
City, State, ZIP code ____________ Area code ____________

6. Check mailing address you wish used: ☐ School address (item 4) or ☐ Residential address (item 5)

7. Minimum one-way distance (highway and/or rail) from home to Institute: ____________ miles

8. U.S. citizen: ☐ Yes ☐ No 9. Marital status: ☐ Single ☐ Married ☐ Widow(er) ☐ Divorced or separated

10. If you have a spouse, what is his or her occupation? ____________

For *every dependent* who receives support from your individual income and who is listed as an exemption in your current Federal income tax return, please supply the information requested below. (Do not include yourself. Do not include your spouse if he or she has a gross income of $600 or more per year.) Add separate sheet if necessary.

NAME	AGE NEXT JULY 1	RELATIONSHIP TO APPLICANT	OCCUPATION	WHAT PERCENTAGE OF HIS YEARLY SUPPORT COMES FROM YOUR INDIVIDUAL INCOME?

Your individual yearly income constitutes what percent of the combined gross yearly income of yourself and spouse? ________ %

How many dependency allowances do you request from the Institute? ________ (Four is the maximum that can be granted.)

If the persons listed above do not receive more than half of their support from your individual income, *please explain* the basis for your request for dependency allowances. (Use separate sheet.)

11. Employment Record.—List professional experience of the past 5 years in teaching and work related to teaching. *(List in reverse chronological order giving present or last position first)* (Add separate sheet if necessary.)

DATES	EMPLOYER	NATURE OF ACTIVITY
Current Position 19__ to 19__		

12. Check your certification status: ☐ No certificate ☐ Temporary or emergency ☐ Permanent or fully accredited.
Certification deficiency (if any) is in ☐ Science or mathematics ☐ Education ☐ Both ☐ Other.

13. Years of teaching experience (by June of this year) in:
(a) elementary school (grades K-6): __________ years, from __________ to __________;
(b) secondary school (grades 7-12): __________ years, from __________ to __________;
(c) college (including junior college): __________ years, from __________ to __________;
(d) other (specify: __________): __________ years, from __________ to __________.

14. List your own complete weekly school schedule at the time of this application.

NAME OF COURSE OR OTHER ASSIGNMENT	GRADE OR LEVEL	PERIODS PER WEEK

Each period is __________ minutes long.

15. Science and mathematics teaching experience.

SUBJECT	NO. OF YEARS EXPERIENCE
Biology	
Chemistry	
Earth Science	
General Science	
Mathematics	
Physics	

16. College or university education:

INSTITUTION	SCHOOL OR DEPARTMENT	YEARS		DEGREE	MAJOR SUBJECT	MINOR SUBJECT(S)
		FROM—	TO—			

17. List *all* programs (four weeks or more in length) specifically for science or mathematics teachers that you have attended. Include ALL Summer Institutes, In-Service and Academic Year Institutes, and all Research Participation programs, in which you have participated, whether NSF-supported or not. Also list any NSF Fellowship you have held. Write "NONE" if you have participated in no previous programs of these kinds. ***(YOUR APPLICATION WILL NOT BE CONSIDERED IF YOU FAIL TO LIST THE INFORMATION REQUESTED HERE.)*** Use additional sheet if necessary.

NAME OF HOST INSTITUTION	TYPE OF PROGRAM: A.Y.I., SUMMER I., IN-SERV. I., RESEARCH PARTIC., NSF FELLOW.	DATE	LENGTH IN WEEKS	AMOUNT OF FINANCIAL ASSISTANCE	SOURCE OF ASSISTANCE (NSF, ETC.)

18. For *every* course studied in college or graduate school in the fields listed below, list (a) the course number as recorded on your transcript, (b) the descriptive title of the course, (c) the year it was taken, (d) number of semester-hours credit received (record amount in column U if the credit was undergraduate credit, and column G if it was graduate credit; if it was quarter-hours, multiply by 2/3 to convert to semester-hours), (e) grade received. *Include and MARK WITH AN ASTERISK (*) EVERY course taken in a Summer Institute, In-Service or Academic Year Institute,* even if no grade was given. Explain any grading scale that is not standard or common, putting the explanation wherever there is room on this page.

Record all requested information here, not on extra sheets. For additional subjects pertinent to Institute in fields not listed below, or if more space is needed, provide space by changing the title of an unused block or use any area available.

This summary must be accurate, therefore it will be necessary for you to obtain the information from your college transcripts, not from memory. If and when the Institute Director requests and obtains your transcripts, he will check them against the information you record below.

BIOLOGICAL SCIENCES

COURSE NO.	DESCRIPTIVE COURSE TITLE	YEAR TAKEN	SEMESTER HOURS		GRADE
			U	G	
Total number of hours					▨

CHEMISTRY

Total number of hours					▨

PHYSICS

Total number of hours					▨

MATHEMATICS

COURSE NO.	DESCRIPTIVE COURSE TITLE	YEAR TAKEN	SEMESTER HOURS		GRADE
			U	G	
Total number of hours					▨

EARTH SCIENCES

Total number of hours					▨

EDUCATION

Total number of hours					▨

19. In comparison with the above record, evaluate the *present* state of your knowledge in the various subject fields:

(a) My present knowledge is more extensive than implied by the record in the field(s) of ______

(b) The above record fairly represents my present background in the field(s) of ______

(c) The record includes substantial material no longer familiar to me in the field(s) of ______

(Further explanation or elaboration may be included in the essay on page 4.)

20. Number the following areas in order *of your interest in further study,* labeling your first choice "1", second "2", continuing until all are numbered that you wish to study further. Add other areas as appropriate. Biology______; Chemistry______; Earth Science______; General Science______; Mathematics______; Physics______; ______________.

21. What professional journals and scientific publications do you read regularly?

22. List the technical and professional science and education organizations (local, state, national) of which you are a member.

23. Discuss briefly your plans for professional training and your reasons for wishing to participate in this specific Institute, sketching briefly the benefits you hope to derive from such participation and their relationships to any special problems you face in your teaching situation. (If you have attended other Institutes, you should also explain why participation in this additional Institute is desirable for you at this time and your reasons for believing that it would not be duplication.)

(This page may be written in script. The others should have been typed or printed.)

24. Recheck this entire form to be sure that you have completed *every* item in accordance with the directions given at the beginning and the directions associated with individual items. Be sure that you have given full and correct information concerning your dependents (item 10), and full and correct information concerning Institutes you have attended (items 17 and 18). When this has been done, sign the following statement:

"I certify that the information given in this application is accurate and complete."

Signature ______________________________ Date of application ______________________